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An Account of Surgical Instruments, lately invented by THOMAS CLARK, *M. D.*

[With Engravings.]

IT appearing to me, that hitherto there was no surgical instrument well adapted to the enlargement of *gun-shot wounds* equally throughout their whole course, and particularly deep ones, I have invented an instrument which, in my opinion, will answer the intended purpose when wounds proceed in straight directions.

It consists of a straight director and a double edged knife, sharp on both sides near to its point, with a long ridge on its back, accommodated to the size of the groove of the director.

The mode of using this instrument is as follows: The director being cautiously introduced to the bottom of the wound, and placed as nearly as possible in its centre, it is then to be firmly retained in this situation by the left hand. The extremity of the ridge on the back part of the knife next to its point is to be introduced into the exterior extremity of the groove of the director by the right hand. This being done, let the knife be gradually passed along the director until it reaches the bottom of the wound. The knife and director may then either be withdrawn separately or both together. In some cases it may perhaps be proper to move the point of the knife a little from side to side at the bottom of the wound in order to enlarge it somewhat more near to the seat of the ball than elsewhere, with a view to render it more easy to lay hold of the ball.

As the groove of the director and the ridge of the knife are so constructed as effectually to prevent their being disengaged from one another, unless at the extremity of the director next its handle there is not the smallest risk of the parts of the instrument separating during the operation.

And as the edges of the knife are blunt, except near its point, it must of necessity be withdrawn from the wound precisely by the same passage through which it entered.

Observations on the Nature of the Forceps commonly used for extracting Balls from Gun-shot Wounds; together with an Account of several Pairs of Forceps.

After fully considering the principles upon which forceps generally in use for the extraction of musquet-balls from wounds are formed; it occurred to me that they are liable to several objections which might be easily remedied.

In the first place, in extracting a ball with common forceps, if it is not situated between the blades near to their points, the points of the forceps, of necessity, will be at a greater distance from each other than the diameter of the ball, as the blades of the common forceps diverge from each other like radii of a circle. Hence, the farther a ball is placed from the points of the forceps, the greater will be the distance between them; consequently, it must be granted that great injury and inconvenience will occasionally happen in extracting balls with the common forceps, when they are situated at a considerable distance from their points.

Another and perhaps a more material disadvantage of the common forceps seems to be, that after they are in contact with the ball, although their points may be expanded to a distance equal to the ball's diameter, still it very often happens that while one of the blades might be passed on so as to be properly applied to the ball, that it is prevented from passing on, owing to the point of the other blade being immediately opposed by the ball. In such a case, I think it must be allowed that forceps constructed with blades capable of being moved easily backwards and forwards, so that one blade may be passed along, and be properly applied to the ball, while the other is prevented from being applied in a like manner, owing to its point being opposed by the anterior part of the ball, might possess considerable advantages over the common forceps. For it seems more than probable, that after one of the blades has been properly applied to the ball, that the other might also, after several attempts, be applied in a similar manner; as, surely, every one must grant that it is much easier to direct one blade of a pair of forceps at once, than to direct both blades at the same time.

With

With a view to obviate these objections, I have invented the forceps delineated fig. 1.

When the blades are parallel, their distance from each other is exactly equal to the diameter of a musquet ball; the intermediate part in which the hinge is, being precisely equal in length to the diameter of a musquet ball. The blades can be easily moved backwards and forwards, in such a manner that either may be easily made to project beyond the other for about half an inch, which distance I should imagine to be quite sufficient on most occasions. However, if half an inch is not considered as enough, forceps may very easily be constructed so as to admit of a much greater degree of motion. Therefore it must be allowed, that the being able to move the blades in the manner now described, will be often attended with considerable advantage. Lastly, as the blades of the forceps are only parallel when separated to a distance equal to the diameter of a musquet ball; and as their points, until the blades become parallel, approach nearer to each other than any other parts of the blades, it, in my opinion, must also be allowed, that the points of the forceps last mentioned, will not be so apt to meet with resistance from the soft parts, as the points of the common forceps would have been. The blades of the common forceps constantly diverge from each other as radii of a circle; but the blades of the forceps invented by me, do not diverge from one another in the least, until after they become parallel. And even after their points are separated to a much greater distance than the diameter of a musquet ball, they by no means diverge from each other so suddenly as the points of the common forceps. Hence, at all events, we must infer, that as the points of the forceps with moveable blades, until they become parallel, are constantly nearer to one another than any other part of the blades; that the part of the blades nearest to their points being at a greater distance from each other than the points themselves, will in a great measure prevent the softer parts from being opposed to the points of the blades, by the blades immediately behind their points, as it were, in a great measure removing the soft parts which otherwise would be opposed to them.

Upon the whole, therefore, I am decidedly of opinion that the forceps of my invention, with blades capable of being moved backwards and forwards, as already described, possess several very important advantages over those in common use.

It may be said that these forceps cannot be conveniently introduced into deep wounds, on account of the distance of the blades from each other near to the hinge. But if this distance is only equal to the diameter of a musquet ball, such an objection must be ill founded, as the whole wound necessarily will be distended equal to the ball's diameter, before it can be extracted. However, with a view to do away such an objection, I have had forceps bended, as represented in fig. 2. That part of the forceps near, to their point, intended for receiving the ball, remains in the same condition as if the blades had not been bended. Therefore, when a musquet ball is any where included between these parts, they will be parallel; consequently, it is of no importance whether the ball is placed near to the point of the forceps or a little farther back.

As at first sight, perhaps, the reasoning already advanced concerning these newly-invented forceps, may not appear altogether just to some, I have had a pair made pretty much on the same principles with the common forceps; but with this difference, that the blades may be easily moved backwards and forwards. Vide fig. 3.

Before quitting this subject entirely, I think proper to mention, that I am of opinion, that forceps for extracting stones from the urinary bladder, constructed on principles nearly similar to these lately mentioned, might be preferable to those commonly used. In this case, there would be no occasion for blades being capable of being moved backwards and forwards, &c.

A Description of an Instrument for removing Strictures of the Urethra.

Strictures of the urethra being often productive not only of much real distress to those afflicted with them, but more frequently having been the occasion of death itself, has induced me to think seriously on the subject. It affords me infinite pleasure to say, that I have been fortunate enough to contrive a very simple instrument, which I should hope will prove highly beneficial in most cases, and will, in a great measure, supercede the hazardous application of caustic, or the introduction of sharp-pointed instruments.

The seat of the stricture being ascertained, a silver canula, including a round large blunt pointed probe, fitting exactly, and projecting a little beyond the canula, in order to prevent the urethra being injured by the canula, is to be

be introduced into the urethra, and passed on until it reaches the stricture. The blunt probe is now to be withdrawn; the canula in the mean time being firmly retained in its situation. Then let the instrument, represented in fig. 5, be introduced into, and passed along the canula, until it reaches the stricture. It will now be necessary to endeavour to pass the silver probe attached to the point of the cutting instrument, through the stricture. As soon as this is effected, the cutting instrument must be pushed forwards, with a view to divide the stricture, which in most instances, I should suppose, will be easily done. The cutting instrument being withdrawn, a bougie ought to be introduced, either through the canula or after it has been removed, in order to ascertain, beyond the possibility of doubt, whether the stricture has been completely divided. If it has not been completely divided, it may be again proper to use the instrument, and thus effectually remove the disease. It seems almost unnecessary to say, that bougies ought to be introduced from time to time until the divided parts become perfectly sound.

The steel probe, with the lancet point, should fill the canula completely, and the breadth of the lancet should be somewhat less than the diameter of the steel probe. By these means, the silver probe will be directed precisely in the centre of the urethra, while, at the same time, the edges of the knife will not be blunted in passing through the canula. With regard to the utility of the silver probe, fixed to the point of the lancet, it seems so evident, that it appears almost unnecessary to say any thing concerning it. If the probe passes through the stricture, it must inevitably happen, that when the probe is pushed further in, that the knife will follow it, and consequently divide the stricture. That this mode of removing strictures is far preferable to any of the methods commonly practised, I think cannot admit of a single doubt.

The removing of strictures by means of bougies, at best, is a tedious and troublesome process; and, with regard to the use of caustic, or sharp-pointed instruments, they are not only tedious and uncertain remedies, but may be productive of the most dangerous consequences by destroying or puncturing the sides of the urethra, and thereby forming communications between the urethra and its cellular substance. Hence profuse hæmorrhages may take place, or urine may be affused into the cellular substance, and give rise to very violent inflammation, and its dreadful consequences. On the contrary, when this cutting instru-

ment

ment is used, there is not the least danger of the sides of the urethra being materially injured, as the silver probe must of necessity be lodged in the centre of the urethra, and the cutting part of the instrument will consequently follow the same course.

The instrument now described is evidently only calculated to remove strictures within the reach of straight instruments. However, I am of opinion, that an instrument upon the same principles may be easily constructed, so as to remove strictures in whatever part of the urethra they may be situated. The cutting part of the instrument, with the silver probe attached to it, might be easily fixed to a pliable piece of whale-bone or to a bougie. A canula of elastic gum being introduced into the urethra, as far as the stricture, an instrument, such as now mentioned, certainly could be passed through the canula, and used in a similar manner with the straight cutting instrument already described. In this way, I am of opinion that strictures, even at the neck of the bladder, might be removed.

An Account of an Instrument, &c. for removing Substances, such as Pins, Pieces of Money, &c. from the Œsophagus.

No branch of Surgery appears to me more defective than that relating to the removal of substances lodged in the œsophagus, such as pins, pieces of money, bones, &c. I lately directed my attention to that subject; and, I believe I have been fortunate enough to invent an instrument which, on many occasions, will prove of infinite service.

It consists of a tube of elastic gum, and a long piece of whale-bone, to which four elastic steel hooks are fixed. Vide fig. 8.

The tube, including the whale-bone, with its appendages, the extremities of the hooks being just at the further extremity of the tube, is to be introduced into the œsophagus and pushed gradually downwards until it reaches the substance that may happen to be lodged there. Let the tube now be withdrawn about two inches, and kept firmly in its situation by the left hand; then let the whale bone be forced gradually downwards, by the right hand; for about three inches. As soon as the points of the elastic hooks pass a little beyond the tube, they will begin to gradually expand themselves; and, by the time they have passed the extremity of the tube for about two inches, they will be expanded to such a degree as to distend the œsophagus completely,

pletely. This being the case, if they are pushed downwards for another inch, or thereabouts, the presumption is, that they will have passed beyond the substance to be extracted, and owing to their number, nature and situation, it is more than probable, that some of the hooks will have passed on each side of it. The whale-bone is now to be firmly retained in this situation, and the tube in the mean time to be gradually pushed along the whalebone for about two inches. In other words, the tube is to be passed downwards until it again reaches the substance to be extracted. This being accomplished, it will be proper to keep the tube in its present situation, and attempt to withdraw the whalebone. If the substance to be extracted is small, and capable of being bended easily, it may be withdrawn through the tube. Pins, or bits of wire, might be removed in this manner. Or, if the instrument has not laid hold of the substance, it will of course be readily withdrawn; however, I should hope that this will seldom happen. Again, if the substance to be extracted cannot be made to pass through the tube, the making an effort as it were to withdraw the whale-bone will be necessary, in order to fix the substance properly in the hooks. This being done, the tube, along with the whale-bone, must be carefully and very gradually removed; and I believe I may venture to say, that substances, after being secured in the manner now described, will be very seldom disengaged from the instrument until they are completely removed from the œsophagus.

Upon the whole, I do not hesitate to give it as my opinion, that instruments constructed on principles similar to those of that now described, will be found preferable to any instrument heretofore used for extracting substances from the œsophagus.

An instrument with only two or three hooks, I should imagine, would answer the desired purpose in most instances. But if a greater number of hooks than four should at any time be deemed requisite, it will be a very easy matter to make an instrument with six or eight hooks.

An Account of a Tourniquet, &c. for the Tongue.

When it becomes necessary from cancerous sores or other causes, to extirpate a portion of the tongue, the profuse hæmorrhagies which almost constantly ensue, are often the source of great embarassment to the operators, and not unfrequently endanger the lives of the patient. Nay, it seems to me extremely probable that many lives have been lost

from

from the want of an instrument capable of commanding the circulation in the tongue. In some instances, the dread of profuse hæmorrhagies may have deterred practitioners from operating on the tongue, when, from the other circumstances, an operation might have been extremely proper. In other instances, it is very probable that profuse hæmorrhagies, in consequence of operations performed on the tongue, may have ultimately occasioned death.

From these very important considerations, I have been induced to exert my faculties to the utmost, with a view to invent an instrument which might at pleasure command the circulation in the tongue. Notwithstanding the instrument which I have invented is only calculated to compress the tongue as far back as the frænum-linguæ extends, still however an instrument capable of producing this effect, is on many occasions a very desirable object. By means of it, operations may be performed nearly as far back as the frænum extends, with the utmost safety; that is, so far as regards the restraining of hæmorrhagies.

Description of the Instrument, Fig. 4.

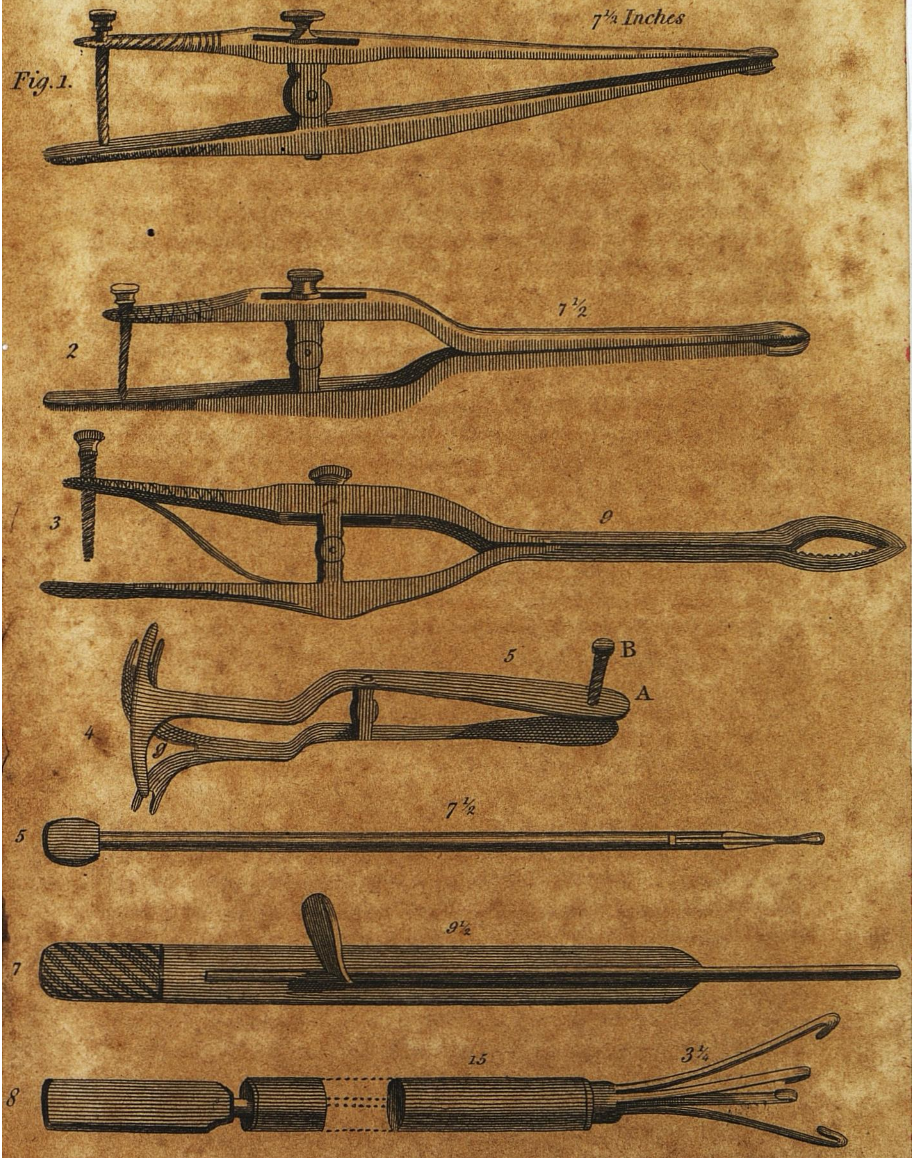
The blades or divisions of the instrument are separated from each other by depressing the extremity of the upper one at (A). This being done, the under part or division of the instrument is to be placed under the tongue, and the anterior part of the frænum being received into the slit at (S), the instrument should be pushed as near to the root of the tongue as possible. The extremity of the upper part of the instrument next to the root of the tongue is now to be made to approach the extremity of the part of the instrument under the tongue; to such a degree as to stop the circulation in the anterior part of the tongue. This effect is very easily produced by separating the extremities of the blades of the instrument without the mouth by means of the screw nail (B) passing through the upper one.

Thus the circulation of blood in the anterior parts of the tongue may be at pleasure effectually stopped, and consequently the danger attending operations there, will be rendered much less than otherwise would have been.

To Dr. BATTY.

SIR,

WILL you have the goodness to signify, in your next Journal, that I am preparing a third edition of my Medical Reports for the press, in which there will be considerable additions; and that I solicit the Communications of such gentlemen as may have made a trial of the practice in fever, which I have recommended. Mr. Nagle, late



Dr. Clark's newly invented Instruments.

See Vol. IX. page 8.

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late Surgeon of his Majesty's ship Ganges, in a letter dated Torbay, 22d of last September, informed me of the extraordinary success with which he had used the cold affusion in what he calls the endemial causus of the West Indies, from which quarter he was just arrived. With the view of obtaining more particular information, I addressed a few queries to him at Portsmouth; but not having received an answer, I conclude that my letter has not reached him, through the insufficiency of the address.— Wishing much to hear again from that gentleman, and not knowing where he resides, I take the liberty of signifying this wish to him through the medium of your Journal. I am, &c.

Liverpool, 12 *Dec.* 1802. J. CURRIE.

P. S. It would give me great pleasure to hear from any of the respectable practitioners of our fleets or armies, who may have made trial of water internally or externally in fevers, or febrile diseases, in any quarter of the world.

New Experiments on Mercurial Salts, by Cit. FOURCROY; *extracted from the Transactions of the Physical Class of the National Institute for the last three Months, and communicated by our Correspondent at Paris.*

THE Author had been already occupied in inquiries into the nature of these salts; he had already established three kinds of sulphat of mercury; the first a neutral salt, the second contained an excess of acid, and the third an excess of oxyd. These different salts are obtained by boiling one part of mercury with one and a half of sulphuric acid. If the operation be stopped, when the mercury is changed into a white mass, but not dried, you have the sulphat acid of mercury. If this sulphat acid be washed with a little water, until the water no longer changes vegetable blues, you have the neutral sulphat. The sulphat with excess of oxyd or turbith mineral, is prepared by heating one or other of the preceding salts, particularly the last, until the mercury has seized on part of the oxygen of the sulphuric acid, and until the sulphurous acid is disengaged. The neutral salt is soluble in 500 parts of cold water; it is precipitated by fixed alkalis of a grey colour. It

It is not decomposed by nitric acid, and forms a mild, muriat with muriatic acid. It is composed of

Acid	12
Mercury	75
Oxygen	8
Water	5
	100

The salt, with excess of acid, is more soluble than the former, according to the excess of acid; it is precipitated yellow by fixed alkali, giving out much caloric, and is not decomposed by nitric acid; it differs from the preceding in its component parts only in the greater quantity of acid, and this last varies much. The salt with excess of oxyd or turbith mineral is yellow; it is not soluble in less than 2000 parts of water, is precipitated of a grey colour by fixed alkali, is decomposable by the nitric acid, and gives a superoxygenated muriat of mercury with muriatic acid. It is composed of

Acid	10
Mercury	76
Oxyd	11
Water	3
	100

Ammonia precipitates all these mercurial salts of a grey colour, but it forms at the same time a triple salt, namely, an ammoniaco-mercurial sulphat. It is formed in greater quantity with the mercurial sulphats with excess of acid, than with the neutral sulphat, and greater with this last than with the one with excess of oxyd. This salt is but little soluble in water; fixed alkali precipitates it white, ammonia dissolves it easily, and muriatic acid decomposes it. It contains

Acid	18
Ammonia	33
Oxyd mercury	39
Water	10
	100

It is the continuation of Cit. Fourcroy's labours on this subject, that he now communicates to the Institute; and our Correspondent thought it necessary to give the preceding very brief account of what has been already reported in the Tranasctions of the National Institute, in order to put our readers in a state to judge more easily of the

the facts which are to be now described. Cit. Fourcroy observes, that in order to complete the labours on mercurial sulphats, we may prepare these different kinds of salts, not only by heating mercury with the sulphuric acid, but also by mixing this acid, or a soluble sulphat, with a nitric solution of mercury, more or less oxydated; we then obtain, according to circumstances, sulphats of different kinds. He then gives the proportions of acid, oxygen, and mercury which compose the different neutral sulphats, or acids, whether little or much oxydated. The nitrats of mercury have furnished Cit. Fourcroy with observations still more new and more important to sciences, than the sulphats. There are two kinds of nitrats; the one much, the other but little oxydated. The first is precipitated grey or almost black by the alkalis, and white by sulphats; it forms mild mercury with muriatic acid. The nitrat much oxydated, the consequence of strong and long continued ebullition, gives no precipitate with muriatic acid; it gives a yellow with sulphats, a white with ammonia, and an orange yellow with fixed alkalis. Nitric solutions of mercury, are often the mixture of two salts. That which is precipitated by water is the solution of oxyd much oxydated or red, in acid much concentrated. When we precipitate a nitric solution of mercury, but little oxydated by means of a fixed alkali, the first portion of the white somewhat coloured precipitate which is obtained is an insoluble and neutral nitrat of mercury, formed by an union of a portion of the separated oxyd with the remainder of the solution not decomposed. Citizen Fourcroy compares the properties of the nitrit and nitrat of mercury; almost all the solutions contain somewhat of this last salt. It is made by passing nitrous gas in the nitric solutions, which absorb it greedily; the superoxygenated nitrat is that which absorbs most. This last nitrat of mercury disengages much vapour by means of the sulphuric and nitric acids; it changes the skin to a deep purple, while the nitrat, much oxydated, turns it black; and the nitrat, but little oxydated, produces no change whatever. It keeps longer in the air than the alkaline nitrits, which absorb the oxygen, and pass into the state of nitrat. These nitrits are easily prepared by impregnating with nitrous gas the solutions of nitrats.

The Author means next to occupy himself with the muriats of mercury, of which he has discovered a new kind; as also with the sulphurs of this metal.

Chemical and Medical Experiments on the Diabetes Sauar, by C. Nicholas, M. N. I. and C. Gueudeville, M. D. *of Paris.*

THE presence of sugar, which for a long time was supposed to exist only in the sugar cane, is now known to exist not only in the vegetable, but even in the mineral kingdom, as is proved by the experiments of C. Vauquelin on the emerald, &c. Some of the products of milk had shown a matter analogous to sugar; and our countryman, Willis, had long ago remarked, in the affection in question, the sweet taste of the urine. C. Nicholas and Gueudeville, having met in their practice many people attacked with diabetes, instituted a series of comparative experiments on the urine of persons afflicted with diabetes, and that of persons in health. They have proved, by a number of experiments, the existence of the sauara-muscous substance in this first, and from which they extracted the acetous and alcohol, whilst the latter or healthy urine was not found susceptible of any fermentation either spirituous or acetous. This memoir comprehends a history of the supposed causes of this disease, and of the methods of cure from the days of Hipprocrates to the present, together with a description of all the symptoms. The following are the principal points of this memoir: This disease is more frequent in countries where general use is made of cyder or drinks of this kind; it is owing principally *to a continual spasmodic derivation of the nutritious juices unanimalized on the urinary organs, which also changes the gastric, pancreatic, and biliary fluids, &c.!* It appears to be peculiar to muscular temperaments; its seat is in the organs of digestion, and the urinary organs supply by the excess of their evacuations, the other secretions and excretions, which in this case become suspended. The urine, which, as we have already stated, runs into vinous and acetous fermentation, gives an alcohol of a disagreeable smell, a sugar which crystallizes, the nature of which is not as yet well known, instead of the uric and benzoic acids, which it should contain; the ammoniacal and phosphoric salts are in small quantity; the blood of people labouring under this disease is very serous, and contains but little of the above salts. These phenomena offer to the authors the following indications. 1st, To take off spasm. 2dly. *To restore to the nutritious juices the principle of animation!* To accomplish this, we must chuse food and remedies from among those substances which contain azot and phosphoric salts; and after these indications, the authors prescribe a regimen of animal food composed of fat meat, and milk as drink, in which

may

may be dissolved phosphat of soda. As medicine, they recommend bolusses formed of the watery extract of opium, and wine, and sometimes musk. This treatment has been followed by compleat success.

Cases admitted under the Care of the Surgeon of the Finsbury Dispensary, St. John's Square, Clerkenwell, from November 10, *to December* 10, 1802.

Phlegmone - - - - -	2	Vulnera Artuum - - -	3
Erysipelas - - - - - -	6	Contusiones - - - - -	2
Arthrodynia - - - - -	1	Combustura - - - -	6
Abscessus Artuum - -	2	Lues - - - - - - - - -	4
Mastodynia - - - - -	1	Gonorrhœa - - - - -	1
Abscessus Scrophulosi -	7	Strictura Urethra - - - -	1
Ulcera Artuum - - - -	12	Crusta Lactea - - - - -	2
——— Faucium - - -	2	Eruptiones Chronicæ - -	4
Fistulæ in Perinæo - -	2		—
Cancer Uteri - - - - -	1	Total	58

There has been less *variety* in the diseases of our Report during the last Month than usual, as will appear from the above list, which is principally, with a very few exceptions, composed of inflammatory diseases and their consequences, and of accidents: indeed, our attention has been very much confined to a single disease under a variety of forms, and arising from various causes; which has been so extremely frequent in our district of late, as justly to acquire the denomination of an epidemic; I allude to Erysipelas. Although, in the above list, there appears only six cases under that name, which includes merely those which arose idiopathically, without any manifest external cause, yet almost every case of wound, ulcer, &c. &c. has been succeeded by, or attended with, inflammation of this description, to a more or less extent.

I have observed, in the progress of this disease, that some of the most dangerous cases have arisen from the most (apparently) trivial causes: Several instances of wounded fingers and whitloes have been followed by Erysipelatous inflammation to such extent, as to occasion considerable alarm with respect to the life of the patient. One case, which was attended with a peculiar rapidity of progress, and malignity of appearance, was in the person of a woman, about fifty years of age, of a habit, feeble, delicate, and extremely susceptible of irritation: She had a whitloe form in the thumb, which was small; this was opened by a lancet, when the formation of matter was evident. A few days after, the glands at the elbow

and

and axilla became enlarged, and an inflammatory blush appeared over those parts, and along the course of the absorbents; this was very soon followed by an universal Erysipelas of the whole limb, from the fingers to the shoulder, and even extending along a part of the trunk. In the course of a very few hours from the appearance of the Erysipelas, (so rapid was its progress) vesications arose on every part, several of which were as large as hens eggs, and of a livid aspect: The system was affected with *extreme debility* and symptoms of irritation. By the very copious administration of *cinchona, opium,* and cordials, with spirituous local applications, the disease was subdued, and the patient is now nearly recovered.

This is not the only case wherein causes as slight as the above have produced erysipelatous affections of great danger; they have arisen frequently around old ulcers, from wounds of (primarily) no apparent consequence; and in several instances, have appeared without any known cause. One case of the latter kind occurred in the leg of a man, who was, though young, of an originally delicate habit; which state of constitution had been increased by his occupation, which was that of a painter. After a rigor, Erysipelas attacked his whole lower extremity; and very shortly proceeded to a state of gangrene, and nearly the whole of the integuments of the leg and foot sloughed; he, nevertheless, recovered.

With particular attention I have remarked, that every case of Erysipelas which has occurred, has been, unequivocally, a disease of debility. The majority of the objects of charity in a large city, are of debilitated constitutions, and peculiarly subject to debile diseases from their habits of life; but this observation is not universal, as there are some of vigorous constitutions and robust stamina: The former of these are liable to the attacks of Erysipelas; the latter to phlegmonous inflammation; from the same remote causes manifesting an analogy with the different species of fever, Synocha and Typhus. This assertion will appear accurate, by comparing the above case of Erysipelas succeeding a disease of the finger, (of which kind several other cases have occurred) which happened in habits of debility, with two other recent cases which occurred in contrary constitutions. Two young men, of robust and healthy appearance, had each a whitloe of the finger; in both, inflammation extended along the absorbents, (as in the above case of Erysipelas) and the ulnar and axillary glands became enlarged; but in this state of the disease, the inflammation in these did not spread,

spread, like Erysipelas, over the whole arm, but confined itself to a particular spot. In one of these cases the glands, just above the elbow, inflamed; in the other, one of the axillary glands: that inflammation was truly phlegmonous, and in both cases suppurated, forming buboes, which readily healed.

There was a great similarity in cause and effort of Nature in all these cases: The cause was alike in all; the absorbent vessels in all were inflamed, and the glands were slightly enlarged. In the healthy and vigorous constitutions, the healthy inflammation took place in the glands; an inflammation which works its own cure: but in the debilitated habits, Nature was insufficient to effect this operation; and the inflammation of disease and debility took place instead; an inflammation which the system is scarcely able to sustain, requiring the most vigorous aids which we are enabled to bestow.

It were scarcely necessary to mention a fact, which, I believe, is by most practitioners admitted, that Erysipelas is a disease of debility, and requires treatment of the most tonic and invigorating nature, but that some modern writers have directed the contrary mode of practice. It appears to me that it is probable, that there must be a difference in the nature of the disease, in different local situations, when we read* that "It is now known, that blood may be discharged with the same safety in Erysipelas as in other cases of inflammation." And that we should adhere "in every respect to an antiphlogistic regimen." And that, by so doing, "almost every Erysipelatous tumor may be discussed." I would by no means think of contradicting these assertions, as in all probability they are strictly facts, as far as regards the country in which this author practises; but in this city I have seldom, if ever, seen a case of Erysipelas, in which, from the habit of the patient, or other contingent symptoms, I should have dared to have made use of the lancet: on the contrary, I have never observed more decided and rapid advantage result from the administration of medicine, in any disease, than I have seen from the use of the cinchona, wine, opium, and other cordial tonics, in very considerable doses, in every variety of Erysipelas.

No. 68, Hatton Street.

J. RICARDS.

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* Bell's System of Surgery, 6th Edition, Vol. I. p. 128.

Account

Account of Diseases in an Eastern District of London, from Nov. 20, to Dec. 20, 1802.

ACUTE DISEASES.

Typhus Mitior - - -	3
Peripneumonia Notha -	4
Scarlatina Anginosa -	8
Cynanche Tonsillaris -	3
Rheumatismus Acutus -	4

CHRONIC DISEASES.

Tussis - - - - - - -	20
Tussis cum Dyspnœa -	16
Dyspnœa - - - - - -	10
Catarrhus - - - - - -	7
Pleurodyne - - - - -	6
Phthisis Pulmonalis -	5
Hydrothorax - - - - -	2
Palpitatio Cordis - - -	1
Ascites - - - - - - -	2
Anasarca - - - - - -	3
Vertigo - - - - - - -	4
Paralysis - - - - - -	2
Amenorrhœa - - - - -	7
Chlorosis - - - - - -	5
Nephralgia - - - - -	2
Menorrhagia - - - - -	3
Fluor Albus - - - - -	5
Gastrodynia - - - - -	7
Rheumatismus Chronicus	12

PUERPERAL DISEASES.

Menorrhagia Lochialis -	3
Rhagas Papillæ - - -	2
Enuresis - - - - - -	1

INFANTILE DISEASES.

Ophthalmia - - - - -	3
Aphthæ - - - - - -	4
Dentition - - - - - -	1

The Scarlatina Anginosa still continues to prevail, particularly amongst the younger branches of any family where it occurs. It has indeed been so general, that very few of those who have continued in the house have entirely escaped it. This remark applies, more particularly, to the families of the poor, as, in course, every disease which has a tendency to propagate itself, must spread more rapidly where the subjects of it are confined within a narrow space, and where fresh air is supplied in a scanty portion. This disease has been very different in the degree of its violence. In some cases it has been so slight as hardly to require any medical assistance, but in others so severe as to excite considerable alarm.

Some of the patients have complained of a great soreness of the mouth, but this has sometimes attended a mild form of the disease; and though very troublesome, has been frequently accompanied by a mitigation of other symptoms. In one instance, which occurred to the observation of the Reporter, the appearance of some aphthous ulceration about the tongue and fauces was a prelude to the favourable termination of the disease, which had before assumed an unpleasant appearance, and excited considerable anxiety.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

PRETERNATURAL enlargements in various parts of the human frame being the frequent subjects of surgical treatment, the following Case of Steatomatous Tumour may not be deemed unimportant. The size and situation of this tumour being unusual, I have obtained, on a diminished scale, a faithful delineation of its appearance immediately on its removal, and when laid open, *(see the plate)*. I am greatly indebted to my ingenious friend, Mr. Sketchly, of this place, for this representation of it, and which I imagine you will think deserving a place in your truly valuable Journal.

EDWARD FEATHERSTONE, a cottager residing at Maplebeck, a village in this neighbourhood, a man of robust and healthy stamina, and between fifty and sixty years of age, about seventeen years ago, perceived a small swelling somewhat resembling a wart, situated on the left side of the raphe of the perinæum. The tumour rapidly increasing for some years, he applied to an empiric, who made several unsuccessful attempts to reduce its size by various applications calculated to promote absorption. In the course of the last summer, my patient suffering considerable pain from an excoriation of this excrescence, and still greater inconvenience from its suspension and weight, (the size of it being now equal to that of a child's head of seven years old) he requested my assistance in healing the small superficial ulcerations. Imagining the tumour to be of the steatomatous species, and that it received its supply of blood from the vascular organization of the bulbous portion of the urethra, I encouraged the poor man to submit to its removal; a proposal to which he very cheerfully consented; and on the eleventh of last month, in the presence of Mr. BECHA, formerly a respectable Surgeon in this place, and Mr. PIGOT my pupil, the operation was performed, previously securing my patient on a table as in performing lithotomy. To prevent embarrassment from profuse hæmorrhage, I applied the stick tourniquet around the neck of the tumour; by which compression of the vessels, the operation was not attended with the least difficulty. An invariably attendant circumstance with enlargements of this nature is, an abundant vascular supply; and I suppose that not fewer than twenty arteries were se-

cured by ligatures: the lips of the wound were approximated as near as possible, the common dressings were secured by the T bandage, and my patient recovered without any interruption. Four pounds and a half was the weight of this tumour on its removal, and its diameter about seven inches.

Preternatural tumours are supposed to be either rapid or slow in their progressive steps of increase, nearly in proportion to the degree of inflammation with which they are attended. We may therefore conclude that the hasty progress and increase in the case above related, may be attributed to its peculiar situation, exposing the excrescence to the constant irritation of friction and consequent inflammation; and there exists but little doubt in my mind, that had it remained some years longer, it might have attained the weight of at least one sixth of the whole body, reaching probably from the perinæum to the ground, instances of which are recorded in the Annals of Surgery.

Great attention is requisite in distinguishing the nature and contents of tumours previous to their being opened or removed. Systematic writers on Surgery describe steatomatous tumours as being invariably of a firm consistence, as rolling more readily under the skin than others, and their surface as being unequal. I would wish to observe, that these marks of distinction are by no means to be considered as constantly existing. In the case above described, the feel of the tumour conveyed the idea of some fluid fluctuating under the fingers, and its surface was perfectly smooth; circumstances which might have led me into an erroneous opinion of the nature of its contents, had I not met with two or three similar instances, one of which I successfully recovered.

I am, &c.

Southwell, Notts.
Dec. 3, 1802.

BENJAMIN HUTCHINSON.

DESCRIPTION of the PLATE.

Fig. 1. The tumor laid open.

Fig. 2. The natural appearance of the tumour after its removal.

Observations

Observations on the Difficulty of ascertaining the Virtues of Medicines.

TO appreciate the value of remedies, and to determine the efficacy of those which popular experience has introduced, or which art has invented, would appear to be a matter of little difficulty; daily experience, however, proves that this opinion is ill founded. Let us consider for a moment, the fluctuating state of what is called the Materia Medica; we shall find that medicines which at one time were dignified with the title of Specific, have sunk into oblivion even before their panegyrists; new medicines have been introduced; and old ones have been revived with equally great promises of infallibility. It affords rather a discouraging prospect to the advancement of our art, when we reflect, that in all ages, Physicians have boasted of their extraordinary cures; and that these were performed by remedies which their successors have treated with indifference or neglect. The sanguine hopes of youth are sported with in no art so much as in that of Medicine; for every practitioner will recollect, how often, in his early practice, he flattered himself with the idea of having discovered a specific, and found that he only grasped a shadow. The contradictory reports respecting the effects of nitrous acid in syphilis, do not impeach the veracity of any person; they merely shew the difficulty and uncertainty of our art, and point out the necessity of caution. No remedy could be recommended by stronger or more respectable testimony than digitalis has been for the cure of phthisis; yet every candid practitioner must allow that he has been too frequently disappointed in its use. In this insidious and fatal disease, innumerable medicines have been celebrated for their virtues; yet, at this moment, we know no more of its cure than was known in the days of HIPPOCRATES.

In the last Number of the Physical Journal is contained an Analysis of a Treatise on Consumption, by Dr. REGNAULT, in which the use of the lichen islandicus, eatable or eryngo leaved lichen, is recommended with much confidence. This remedy, though it has obtained a place in the Edinburgh Dispensatory, has not been noticed by any late writers in this country, except by Dr. CRICHTON and Dr. WOODVILLE; and it has been very rarely employed. Upon the Continent it is a favorite remedy; and is daily employed in the routine of phthisical cases. I shall not here

here mention testimonials of its efficacy, extracted from the numerous treatises published upon it in Germany, lest I repeat Dr. REGNAULT's quotations; but shall merely confine myself to a few practical remarks. According to BERGIUS, in its recent state, the lichen islandicus is 'eccoprotica,' and in a dried state, 'nutriens, pectoralis.' In the Dispensatorium Fuldense, it is said to be 'astringens, roborans, humectans, inviscans nutriens, antiseptica.' This moss was first recommended by LINNE, Amœn. Acad. as a popular remedy used in Sweden for coughs. It is not used upon the Continent, indiscriminately, in every species of phthisis, nor in every stage of that disorder. It is chiefly recommended in those instances where the cough is attended with purulent expectoration; in cases preceded by, or accompanied with hæmoptysis; in incipient phthisis, where from relaxation there is an increased discharge of mucus from the bronchia; in the sequelæ of measles, attended with a quick, small pulse, pain of the breast, emaciation, violent cough, and purulent expectoration. The use of this lichen is forbidden when vomicæ are already formed and proceeding towards ulceration; in dyspnœa, and where there is an increased action of the vessels with diminished expectoration. Neither has the lichen islandicus been confined to phthisical cases; it has been recommended in malignant fevers, dysentery, and hæmatemesis; as an enema in hæmorrhoids; as an injection in gonorrhœa, &c. &c.

The purgative quality of this lichen does not appear to be considerable, and depends upon a volatile principle, which is dissipated by drying; indeed, its purgative nature may justly be called in question, as the natives of Iceland, who use it for food, do not complain of this effect; and a case is quoted by BERGIUS, in which it restrained, for a considerable time, an obstinate diarrhœa. In the recent state, however, it is said to be boiled in milk and frequently used by the peasants to purge and expel worms. The most usual form of exhibiting this remedy, is a decoction of it in milk, or when this disagrees with the stomach, in water. I have scarcely met with any instances, in authors, where the cure of phthisis has been solely trusted to this remedy; but in general it has been united with other active medicines, as squills, opium, cinchona, &c.

Dr. I. G. FRITZE of Berlin, a celebrated and experienced physician, notices the Iceland moss, in his Medizinisch. Annalen, and recommends it as a valuable remedy in phthisis; but he limits its use to those cases in which pus is expector-

expectorated. To this excellent medicine, he adds, several phthisical patients under his care, have been, for some years, indebted for a tolerable degree of health. He generally exhibited a decoction of it in milk, or when this was disagreeable to the stomach, in water, to which were added the flowers of the hyperic. perforat. et tussilago farfara.

In the Annalen des Klinischen Instituts zu Berlin, by Dr. I. F. Fritze, Professor of Medicine, several cases of phthisis are related, in which this moss was tried. The success does not appear very flattering, nor was the remedy trusted to alone, but several potent auxiliaries were called in, as blisters, issues, antimonial preparations, sal ammoniac, dulcamara, g. ammon. polygala, senega, &c. Where the indication, he observes, is to strengthen the organs of digestion without irritation, to nourish the body, and to supply it with bland fluids, the Iceland moss will be found extremely useful. In his practice he has ordered from three to four ounces, or more, of this jelly to be consumed daily; but when the patient's stomach cannot bear so much, he advises us to lay it aside, as it will be of no use in a smaller quantity. There is so much candour in the following Extract from Dr. Schaeffer's Ortbeschreibung der Stadt Regensburg, that I cannot forbear inserting it. "As this disease (phthisis) occurred here this year, 1786, more frequently than usual, I had an opportunity of trying the usual remedies; but alas! I did not cure one of my patients. I was successful only in those cases, where the patients called in time for assistance; where the fever was moderate, and the disease had not yet fixed itself upon the lungs." His usual practice was to give every second or third day such a dose of ipecac. as excited vomiting two or three times; and in the intermediate days to exhibit the Iceland moss, valerian, polygala, amara, g. arabic, the bark, &c. But when vomicæ were formed and in an inflamed or suppurating state, with considerable fever, there the bark was evidently hurtful. This mode of cure, he adds, was only useful at the commencement of the disease; for when this first period was neglected, as in most instances where the disease had been considered merely as a common cold, not only was the above plan of no avail, but also the following remedies, viz. the expressed juice of plants, wild strawberries, the *juice of cucumbers*, butter-milk, Seltzer water mixed with goat's milk, the watery extract of myrrh, &c. &c.

It does not appear to me that the Iceland moss will ever become

become a favourite remedy with English Practitioners, though it certainly merits a further trial. It owes much of its celebrity to the prevalence of the humoral pathology; for, as it consists of a mucilage united with a bitter, it was supposed that the first principle would render it powerful in inviscating acrimony; and the second in gently constringing and corroborating the muscular fibres of the stomach. The bitter principle however, which has been considered of such importance, cannot be very strong or durable, as it is easily extracted by a slight maceration in cold water, the only process requisite before it is prepared for food. The mucilage is contained in considerable quantity, and it is said to thicken milk or water as much as three times the same weight of gum arabic, but perhaps not more than an equal quantity of linseed. This latter substance, which, as a demulcent, is equal to any we possess, is said to afford but little nourishment, to produce flatulency, and weaken the digestive powers. But in the instance quoted by Dr. Woodville, Medical Botany, Vol. II. p. 305, it is not improbable that boiled linseed constituted the *whole diet* of the people of Zealand during a scarcity of long continuance; in which case it is not to be wondered at that symptoms of debility should occur, attended with "a remarkable distension of the hypochondria, swellings of the face and other parts, which in several instances proved fatal." Perhaps the same effects would arise from the Iceland moss, were it to constitute the sole article of diet for any length of time. We know that caravans have been supported for a considerable time upon gum arabic alone, or occasionally mixed with a little camel's milk, but we cannot suppose that such a diet could be supported without inconvenience. We possess, however, several vegetable substances which yield a mucilage more agreeable to the taste than linseed, and which afford as much nutriment, and of as easy digestion, as the Iceland moss. The chief of these are sago, tapioca, Indian arrowroot, and particularly salep; half an ounce of the latter substance, boiled in a quart of milk, yields an agreeable and nourishing mixture, not inferior to any we can procure. Dr. Fritze, in his Medical Annals, speaks highly of the salep, which his experience, he adds, has shewn him to be nearly as efficacious as the Lichen Islandicus. He frequently prescribed it in cases of phthisis, attended with a dry cough, or in which the expectoration was restrained by some acrid matter; the following is the formula which he generally used:

℞. Rad.

℞. Rad. saleb. ℥iss. Granor. sago, ℥j. gum tragacanth. ʒj. M. ft. pulv.

A few tea spoons full of this powder was mixed with warm water and milk, to the consistence of a thick pap, and used night and morning. When the salep was boiled, the lichen islandicus was added to it; and in both modes of preparation, he assures us, it shewed more soothing and healing powers than any balsamics, or than the best preparation of opium. Professor FRITZE observes, that the decoction of salep, and other vegetable mucilages, were peculiarly useful in the more violent stages of hectic fever; in an inflammatory state of the system, or in that of a single viscus. But where the irritation which kept up the fever, partook of a bilious, rheumatic, herpetic, or scrophulous acrimony, they were inferior to the lichen and *boletus suaveolens*, because the two latter substances at the same time strengthen the organs of digestion; whereas the former, when used daily in large quantities, rather relaxed those organs, and at the same time had a tendency to produce a viscid mucus and a morbid acid in the alimentary canal. With regard to the substance last mentioned, boletus suaveolens *(Weidenschwamm)*, it is used in phthisis with the same view as the lichen. Prof. FRITZE observes, that it produced excellent effects in several kinds of hectic, and in the phthisis pituitosa; but in an ulcerated state of the lungs, connected with an inflammatory disposition, or congestion in the breast, this substance, as well as the lichen, exasperated the symptoms. The good effects of both these remedies, he continues, in diseases of the lungs, depend upon their gently astringent, mucilaginous, and restorative qualities. In its sensible qualities, the boletus stands between the cinchona and lichen; it is more mucilaginous than the former, and possesses more of an astringent and volatile principle than the latter. It is given in doses of, from ʒij to ℥j daily, in powder or electuary; when used in decoction, ℥ij of the boletus must be boiled in a sufficient quantity of water, down to ℥vj.

Though it appears probable that the lichen islandicus will never be much employed in this country as a medicine, yet in an œconomical point of view, it merits peculiar attention. In times of scarcity, such as we have lately experienced, this moss, either alone or mixed with a certain proportion of farinaceous matter, offers an useful substitute for bread. In the country from which it receives its trivial name, this lichen constitutes a considerable portion of the diet of the inhabitants; and the har-

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vest of moss is attended to with as much care as that of wheat in this country. The learned VAN TROIL, in his Letters on Iceland, observes, that a flour is obtained from the *fiálgras* (rock grass) L. Island. by washing it, and then cutting it into small pieces, "though the greater number, (he adds) dry it by the fire or sun, then put it into a bag, in which it is well beaten, and, lastly, worked into flour by stamping." It seems probable that this moss has never been used as an article of diet in this country, though it grows abundantly in those parts where the cerealia do not thrive, as in the mountainous parts of Wales, and on the barren rocks, &c. in the Highlands of Scotland. It was formerly supposed to possess eminent virtues in diseases of the liver, hence it obtained the popular name, Liverwort. Dr. REES, in his edition of Chambers's Dictionary, observes, that in the county of Glamorgan, a kind of bread, called laver bread, is made from the sea liverwort; but this belongs to a different family of plants *(Ulva)*.

The juice of raw cucumbers has been mentioned above in the list of remedies used in phthisis; and as it may excite a little curiosity, I shall offer a few remarks upon it. This remedy was first employed by the celebrated MUZELL, of Berlin, in the case of a young man who had several times laboured under hæmoptysis; this was at length checked by three large bleedings, but was succeeded by hectic and great emaciation. The pulse was constantly quick; hot and chilly fits came on after meals, which terminated during the night in sweat. The cough was severe, and purulent matter was expectorated. His strength and flesh continued to waste; the dyspnœa was so great that he was obliged to be raised very high in bed, and immediately lost his breath on attempting to stand erect, or to use the least motion. Being tired of medicines, and milk disagreeing with him, the use of fresh cucumbers was proposed by his physician. Of these he was not limited to any number, but ordered to eat as many, without the skins, as he chose. He was allowed only biscuit, and water for his drink; and by pursuing this plan he obtained a complete cure. Dr. J. G. FRITZE speaks of this remedy in terms of high commendation, and observes, that many phthisical patients are indebted to it for their recovery. He adds, that by this means he has *here* and *there* snatched a patient from approaching death, where every other method had been tried in vain. In those cases where it did not succeed, it still procured considerable relief, by abating the violence of febrile action, quenching the thirst, and improving the quality of the matter expectorated.

Nov. 20, 1802. TYNICOLA.

To Dr. BRADLEY.

SIR,

THE just reputation which the Medical Journal has acquired for disseminating medical knowledge, will prove the best apology for my sending the following Observations, which I beg leave to submit to your approbation. The first part I deemed necessary to the introduction of the second; which is an humble attempt to be useful to my profession and my fellow creatures.

I am, &c.

JOHN HARRIS, M. D.

Kingston, Jamaica, September 13, 1802.

"Est quadam prodire tenus, si non datur ultra." HOR. EP.

"Dimidium facti qui cœpit habet." IBID.

The author who builds his hopes of acquiring popularity and fame on so flimsy a foundation as mere assertion, can little hope for stability in public confidence, when his assertions are opposed by facts. Every man who writes for publication, ought to ask himself this serious question. Am I to write for the good of mankind, or for my own gratification? If the good of mankind be the chief object of his endeavours, truth will guide his pen, and conscience approve his work. If self gratification be the ruling principle, vanity will lead him into error, which may not only mislead the present generation, but may extend its baneful influence to thousands yet unborn. The reader therefore may be assured, that whatever shall meet his eye in the following pages, has been dictated by candour, and will be supported by living evidences.

Long practice has made me fully sensible how little our best endeavours will often avail in surmounting the difficulties and dangers that present themselves almost at every step in the field of medicine. I am thoroughly aware of the numberless avenues that lead to death, and of the insufficiency of human means, and that too in many instances, when the arrogance of science has promised success! Yet there are means afforded by the great Creator to alleviate the sufferings of mankind; by the proper application of which we are enabled often to obviate the stroke of death. He who from attentive practice, experience, and faithful observation, exerts his abilities for the

the good of his fellow-creatures, if they should not be crowned with success at all times, will always feel the reward of his honest endeavours. It would at this day be fortunate for mankind if medical men had always profited by the opportunities of observation, which a long and extensive practice affords; but it is to be lamented that there are practitioners, who, though they have been most favourably placed in this respect, are nevertheless so fettered by the trammels, and bigoted to the notions of former times, as not only to deceive themselves, but to spread the delusion among those whom ignorance, partiality, or fashion may have impressed with a false opinion of their abilities.

The malignant fever, which began its ravages here in 1793, has been erroneously denominated "The Yellow Fever." To distinguish a disease by any particular colour, implies that that colour prevails in every case; whereas, in this disease, the majority of cases met with exhibit no peculiar yellowness of the skin. The most characteristic mark of the malignant fever in question is a peculiar undescribable cast of countenance. All its other symptoms may be traced more or less in other fevers. The disease has been correctly described by Chisholm, Lemprierre, and others. The two first authors agree in the mode of treatment, but others differ very widely indeed; so as, in many instances, to recommend practices in direct opposition to each other! Perhaps, this may be accounted for from the consideration of climate; as it requires no great stretch of understanding to know that the same practice will not answer in all climates: a physician therefore is best qualified to judge of practice in that climate which has afforded him the most experience.

Although it might be expected that physicians, who have long sympathized with human sufferings, are most competent to account for their causes; yet it is much to be regretted, that all we have yet discovered serves but to shew, and oblige us to acknowledge, our ignorance; while we may hope that future discoveries in physiology will enable us to see more clearly into this subject.

Authors may differ in opinion in what they offer to the public; but there is a certain decency of expression towards the adverse party, and modesty respecting self, that ought to be observed in discussing a controverted point; which, while they preclude arrogance and prejudice, leave the reader at liberty to draw instruction from the exercise of his own judgment. A reader who has been in the habit

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of judging for himself, will not be led away by the unqualified assertions and prejudice of an author, or his illiberal condemnation of a medicine; especially when he knows that medicine to have been, and is still, used with success under the strong recommendation of those who stand respectable in the medical world. But there may be some, particularly students and young practitioners in medicine, whose judgment cannot be supposed to secure them against the influence of an opinion, however erroneous, when it is asserted to be the result of long experience. Yet, though it is a matter of regret, that such opinion should be adopted without sufficient inquiry, he who does so is certainly less culpable, than he who from prejudice or dogmatic pride, not only continues a practice and opinion founded in error, but endeavours to impose them on the world.

When a malignant fever makes such dreadful ravages among mankind as to be justly called a new disease, not yielding to any former method of treatment, it becomes not only justifiable but absolutely indispensable to alter our mode of practice; and the physician who persists in an unsuccessful treatment, merely because he has adopted it at the commencement, and was not the first to use or recommend another more successful practice, will be deemed by all good men to be more actuated by pride and obstinacy, than by conscience or by benevolence to his fellow-creatures. To wait for a further improvement of the present imperfect state of our knowledge respecting this fever, without making known by degrees what we learn from experience, would be a delay not only dangerous to the lives of many, but highly derogatory to the duty we owe to society.

The high commendation given to the vigorous use of mercury in this fever, by such candid and able men as Chisholm and Lemprierre, ought to prepossess every one in favour of the utility and safety of the remedy, and prove a sufficient defence against any unqualified condemnation of it; yet it may justly be said, that although the practice has proved the best we at present know, it is much to be lamented that we have not been able to find a much better.

The love of truth alone obliges me to observe here, that the author of a late publication is neither correct nor charitable, when, writing against the mercurial treatment, he says, " I do aver, that altho' I have been called in to attend many under such circumstances, not one survived, and that they became more victims to the mercury than even to the fever."

fever." (Essay on Yellow Fever by D. Grant, M. D. p. 51.)

The author, when he wrote this, could not have recollected the cases of Dr. C. M'Larty and I. M. Grant, Esq. both of whom he had occasion to see, and to prescribe for, under the circumstances he alludes to. The former is to be seen in his Thesis published at Edinburgh in 1797; the latter may probably appear at some future period.

If, on a comparison of the two modes of treatment, we find that many more recover by the use of mercury than by bleeding, or any other practice yet tried; surely every candid practitioner will allow, that the former is the most eligible and safest practice; and he will the more readily adopt this opinion, when he is informed that many here have observed such alarming symptoms often following the use of the lancet, as to induce them to condemn it as destructive.

Whatever opinion we may entertain of the *modus operandi* of medicines, whether satisfactory or otherwise, it should not influence our practice in a disease like this, in which we ought to be guided by our knowledge of the *juvantia et lædentia,* as derived from observation and experience. Ingenious theories look very well on paper; while they give celebrity to the author's acuteness, they will amuse the reader, and may exercise his imagination to reconcile them to practice. If this can be done, it will be no doubt both satisfactory and instructive. But if we cannot comprehend the principles, so as to form a rational theory on a successful practice, we ought neither to doubt of their correctness nor condemn the practice without a liberal trial.

The most learned physicians have not yet been able to penetrate farther than conjecture into the real cause of fevers in general: Nor shall I hazard an opinion on a subject, which has exercised the pens of so many celebrated writers. Though we may not be able to determine in what it consists, there is something peculiar in the constitution of people from a cold country, which renders them more obnoxious to fever in a warm climate, than either natives or those who have been assimilated to it by long residence. Accordingly we find, that the same exposure to the causes, predisponent and occasional, will produce fever in a stranger, while the native or old inhabitant remains in good health; and the symptoms will be tenfold more urgent in the one than in the other, supposing both are attacked. Hence it happens that long residents, and natives in general, are not at all liable to this fever: But when they

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are attacked with the remittent of the country, the symptoms partake more or less of the malignancy of the prevailing epidemic; and require the aid of mercury to forward the cure with bark and the other medicines commonly in use.

I had a remarkable Case of this kind last year, in a young gentleman who had been all his life in a healthy cool situation in this island. He had been but a short time in town, when intemperance in living and exercise, together with exposure to other causes from the prevalence of the epidemic, threw him into a fever, which terminated fatally on the fifth day, in defiance of every thing that could be done for him. Indeed, I did not see him soon enough to try the effect of cold ablution. I thought this case much in favour of the opinion that the malignant fever is of a contagious nature.

The filth of Kingston has been always assigned as one cause of this epidemic. This, with the occasional prevalence of westerly winds, which bring with them marsh miasmata, may, no doubt, have considerable effect on the health of the inhabitants: But these are no new causes for a new disease. If this nuisance and marsh miasmata were the causes of the prevailing fever, why should a like pestilential fever rage on the Continent of America, particularly in cities where police is carried to the perfection of cleanliness? Whatever may be the cause, the dreadful scourge was inflicted nearly at the same period, both in America and in the West Indies.

There may be a peculiar quality in the blood of those strangers, who are the objects of this disease, which disposes the system to such general derangement, when attacked by fever, as no medicine can rectify: for we see, in many cases, when healthy action is restored, particularly in the liver, by the power of mercury, that the black stools become of the colour which the hepatic secretion always gives them; and that other dangerous symptoms vanish. Hence we may fairly conclude, that to attempt the assimilation of constitution to climate by a mercurial course before the attack, is a rational and safe practice, as shall be shewn hereafter: and, indeed, this becomes more indispensably the duty of the practitioners to recommend, and new comers to adopt, when they consider the general mortality attending this insidious disease, after it has been allowed to fix on the much endangered object.

In the true malignant fever now in question, there is not the least remission until it has entirely run through its first stage,

stage, which is generally in thirty-six or forty-eight hours; when there is such an abatement of symptoms, as often to induce the patient to think himself well. Here the advocates for bleeding and bark, imagine they have nothing more to do than to administer the latter in large doses; and are led to pronounce a hasty opinion *of all danger being past.* But an early recurrenee of the symptoms in an aggravated form, accompanied with extreme debility, bids defiance to bark, wine, blisters, and every other stimulant which can be given. If then this great debility and other symptoms of danger supervene in a rapid manner after one, two, or three bleedings, are we not to infer that, if the previous loss of blood had not occasioned, it had at least increased them? These (with occasional delirium) are the general effects of bleeding and bark, at the close of the unhappy scene! At other times the patient slips off, *without fever,* very unexpectedly. How can this be the remittent of the country, which has generally yielded to the bark?

From the torpor of the bowels at the beginning, and during the first stage of the disease, there may be some reason to suspect a deficiency of bile. The abstraction of its antiseptic quality from the bowels when in a healthy state, or its application to them when diseased, may occasion that flow of putrid stools which so frequently occur during the latter stage. That bile is a necessary stimulus to the bowels, communicating salutary effects to the system; that disease happens from deficiency in its secretions, from obstructions in the biliary ducts, or from increased action of the secreting vessels of the liver, whether arising from heat of weather or other causes; and that there may be congestion in the liver, both from accelerated and imperfect secretion of bile; I believe will not be denied by the most zealous opposers of mercury. That this medicine has been proved to possess the most stimulating and deobstruent qualities of any yet known, they cannot deny. Further, that many more are recovered by the mercurial treatment than by bleeding or any other practice, we not only learn from Dr. CHISHOLM's excellent work, from the practice in the fleet on this station, and the naval hospital at Port Royal; but from irrefragable proofs well known to all the practitioners, merchants, and others in the town of Kingston, from the commencement of that practice in 1794, to the present time.

Notwithstanding all the censure which has been bestowed on the prescribers of mercury in Kingston, the practice

practice still obtains, to the total disuse of phlebotomy* in this disease. I shall think myself justifiable then in following the same course until a better be pointed out; on which event I shall freely adopt the better mode, and candidly acknowledge its superiority: For he who is open to conviction, and can so far conquer the pride of human nature as to relinquish a favorite opinion, although not founded in error, is as much farther advanced towards improvement, as he, who persists in obstinacy and error is receding from it.

These few desultory observations I have thought it my duty to make, in defence of a practice I have followed for eight years past. The subsequent part of this paper will be devoted to prophylaxis.

"Venienti occurrere morbo" is an old and very salutary maxim in medicine; and the more mortal the prevalence of a disease is, the more ought we to guard against it.

As mercury has been found in many cases to counteract the violence of malignant fever during its course, it was reasonable to expect that it would change that peculiarity of habit which rendered strangers obnoxious to the disease; and in a great measure prevent that combination of morbid action, which defied the power of medicine in so many instances. Accordingly, for four years past, I have prescribed it, with that view, for all who have applied, immediately or soon after their arrival, for advice; and the result has been such as to authorize the present attempt for the benefit of those who may in future visit the torrid zone. However, there are unfortunately many prejudices which I have found very difficult to conquer, in recommending this practice. These probably have originated as much from the contrariety of opinions delivered to the public, as from individual caprice. Some contend that they are in good health, and will not have it reduced by medicines; saying, that it will be soon enough to take physic when sickness renders it necessary. The minds of others have been prepossessed with the false notion of the bad effects of mercury on the human constitution; while others think that any preparation whatever is altogether nugatory; and that the best way to meet the effects of a relaxing climate is, *to live freely in order to support the strength of Nature.* Alas! that these are mistaken and devoted victims, every day too clearly evinces!

If

* See the annexed letter from Dr. Mac Larty.

If variolous inoculation has long since proved such a blessing to mankind, as to render that mortal disease, and even the plague itself, more tractable by the previous use of mercury; why may we not attempt by the same means, to control the mortal epidemic in question? If there had been but one instance of prevention or preservation from the malignant fever by means of mercury, that alone would be sufficient to recommend the practice; but when numbers of living examples can attest the fact, I trust that this communication will be received with that candour, which is due to good intention; and the practice adopted, both by medical gentlemen and emigrants, with that confidence which is warranted both by irrefragable proofs, and a certainty of its safety. The simplicity of the following directions may raise some scruples in weak minds; but it will be a recommendation to those of a contrary frame.

The plethoric and robust, being the subjects most liable to this disease, on their approach to the hot latitudes are to be bled in proportion to their strength. According to circumstances, of which medical men only are competent to judge, this may also be done immediately after their arrival. The bowels are then to be emptied by some cooling physic, and in some cases the stomach also, by means of an emetic. The same circumstances which regulated the quantity of blood to be drawn, will determine the dose of calomel to each individual, from two to five grains, every, or every other night, until the gums are affected. If it should run through the bowels, as is sometimes the case, a few drops of laudanum should be added to the dose. The best way of taking it, is in form of a powder, in some thick vehicle; pills often becoming so hard as to pass through the bowels unchanged. When the mouth becomes affected, a dose of cooling physic should be administered, after two or three days intermission of the mercury. In some constitutions not easily affected by mercury, it will be necessary to persevere with steadiness, until the system be thoroughly impregnated with the medicine; for thereon depends the safety of the patient. In every instance, temperance is to be strictly enjoined; and exposure to heat and cold to be sedulously avoided, until the patient becomes habituated to the climate.

If at any time, especially during the hot months, the new-comer should feel himself oppressed by heat, nothing will relieve him sooner than the tepid bath; that is, a bath as nearly of the temperature of the body as his feeling can determine. During this time, a cheerful confidence

is to be impressed on the mind, respecting the efficacy of the preparation towards lessening the danger of fever. This is highly necessary, in order to obviate the sedative effects of fear, which in many instances has proved a powerful agent towards fatal terminations, when there was no other alarming symptom.

The custom of early going to bed and early rising is conducive to health every where; but more especially in hot countries. If gentle exercise be added in the morning, it will forward the intention; particularly if the new-comer is obliged to live in town. Those who may have an opportunity of a country residence for some months should always embrace it; nevertheless the foregoing rules are to be observed, especially if they mean to return to town. In all situations, a costive habit of body is to be guarded against by the use of mild purgatives. This preparatory course, independant of malignant fever, will be found extremely salutary against complaints of the liver; so prevalent, and so often neglected, in this country.

It will be easily understood here, that bleeding, as a preparative, will have a very different effect from what it would have in a curative intention; for in the former, it prevents morbid action, and gives time for assimilation; whereas, in the latter, it induces debility, and confirms morbid associations, very dangerous to life.

If I have detained the reader too long, let my zeal for the service of my profession, and fellow creatures, plead my excuse. I shall only add that, although I cannot claim any praise for the execution of this attempt, my intention is entitled to some indulgence from the candid reader; and if this subject should be enlarged upon by some abler pen, so as to recommend the practice to general notice and adoption, I shall be sufficiently gratified in the hope that my attention may be fulfilled in the preservation of some lives from one of the most fatal diseases that ever afflicted mankind.

> "Vive! vale! si quid novisti rectius istis;
> "Candidus imperti; si non his utere mecum."

P.S. Trusting there are none, mentioned in this paper, who would not go much further than contributing their names in the service of truth and humanity, I need not apologize for the liberty of using them in support of a practice, which has been beneficial to themselves, and may prove so to many others.

The following were treated under my own inspection:

1. Mr. James Ore
2. Mr. Robert Mac Glashan
3. Counsellor Kean
4. Miss Young
5. Mr. Thomas Geoghegan
6. Mr. David Clark
7. Mr. John Dwyer
8. Mr. Dennis Dwyer
9. Mr. James Keene
10. Mrs. Courtauld
11. Mr. James Rawlins.

Of the above, the second died of angina maligna; the third, by a fall from his horse; and the eleventh, from inflammation of the bladder, some time after having gone through the fever safely. The rest are still alive and well.

A family of four persons, some months arrived, are now under preparation; one of whom has just recovered from the disease; and the rest are in perfect health.

Extract of a Letter from Dr. Charles Mac Larty, *to* Dr. Harris.

Dear Sir,

IN answer to your inquiries, I shall relate what has fallen under my observation with regard to the use of mercury as a preventive, and of the lancet as a remedy in the fever to which new-comers are subject.

I was induced by the hope of deriving benefit from mercury as a prophylactic, to give it to three passengers and several seamen on board the ship in which I returned to this island in the year 1797. As none of them had been before in a warm country, I was at pains to remove from their minds every dread they might entertain of the unhealthiness of the climate; stating, that it was in their power to obviate its influence, with respect to themselves, by prudent conduct in their mode of living, and in avoiding improper exposure; and, to inspire them with a confidence in mercury both as to its safety and utility, I myself began to take it at the time it was recommended to them. Example in this instance had a good effect, for some who at first expressed aversion to taking mercury on any account, afterwards requested that I would give it to them. Each person came to me every evening for his pill, which contained gr. jß. of calomel. Its use was commenced when about as far to the southward as Madeira, and continued so as to keep up a slight affection of the gums till we arrived off St. Domingo; when an accident which carried the ship into the harbour of Cape Nichola Mole on the 19th of October, rendered me unable to attend any longer to the prophylactic patients. From this till our arrival at Kingston,

Kingston, on the 15th of November, three weeks of which the ship remained at the Mole, not a man was attacked with fever, though it was prevalent on board the ships of the navy, then lying there. This I ascribed more to the terror of the impress having kept our men on board, out of the way of contagion, and clear of the allurements of grog, and its baneful consequences.

As the ship's stay at Kingston after her arrival was short, and most of the people left her at the time, I know nothing of the subsequent history of those seamen who took mercury, two excepted. One had made a voyage to Britain, and told me that during the time he was in Jamaica he had no attack of fever; the other had been impressed into the navy, and, two years after, when I saw him, said he had ever since been in the West Indies and enjoyed good health.

Of the passengers, one has been always near, and in Kingston. Nine months after his arrival he was attacked with fever in a mild form; for the cure of which, mercury was administered. His recovery was speedy and perfect, and he has enjoyed good health ever since. From him I learn that another of the passengers resides at Port Antonio, quite well; and that he had fever, but not till three years after coming to Jamaica. The third passenger has always lived in an elevated and consequently healthy situation on a mountain, in the parish of St. Andrew, from whence he comes occasionally to Kingston for a few days; but has never complained.

To a young gentleman who was about to leave Britain in order to come to Jamaica, I gave directions by letter to begin a course of mercurial medicines immediately on his arriving in the warm latitudes. Though he most punctually attended to what was directed to be observed during the passage, and to every thing recommended after his arrival, he was nevertheless soon attacked with fever in a very aggravated form, and became one of its too numerous victims. This instance would appear to disprove the opinion which you have formed of the efficacy of mercury, as either preventing, or rendering milder, those attacks of fever to which new-comers are so generally subjected; but the instances before related certainly favor such an opinion. Supposing it acted as a prophylactic in only a few out of many trials, it would still be our duty to recommend the practice; and that more especially when it is considered, that by so doing we may relieve strangers from that dread of fever which is often observed to hang on their

 mind.

minds, and which tends not a little to aggravate symptoms, if not perhaps to induce disease.

The practice of bleeding in the fever in question, has now but one abetter among the Medical Gentlemen of Kingston; and he, I suspect, in recommending it, is actuated more by doctorial vanity than by a conviction of its utility. For, after having boasted that he has practised here upwards of thirty years, he could not stoop to acknowledge himself fallible, or even submit to have his opinion called in question.

In the summer of the year 1794, this fever raged with so great malignancy, and the remedies hitherto employed were productive of so little good, that practitioners were eager to try any thing, however doubtful the success. Such was the horror excited by the dreadful mortality which prevailed, that no sooner was bleeding spoken of than every one had recourse to it; even those whose opinions were decidedly against it as a remedy in idiopathic fever. The situation I then held in Kingston, obliged me to be very frequently an operator in such cases. In some the bleeding produced a slight alleviation of the distressing head-ach and general pains, but of short duration, these symptoms resuming soon their former severity. The relief here observed, seemed altogether to arise from a strong disposition which there was in most cases to syncope, even though bled in the recumbent posture. It would be well if the advocates for bleeding did but observe attentively the ultimate as well as the more immediate effects of taking away blood; for though this, by inducing syncope, and succeeding languor, or an approach to syncope, may for the moment abate those symptoms connected with the inordinate action of the heart and arteries; yet the disposition which it gives to debility, sufficiently great without such aid, ought to compel every practitioner to weigh well, whether the temporary mitigation of some symptoms compensates the subsequent bad effects. It is somewhat remarkable, that at the time I speak of, the greatest harm appeared to arise from the use of the lancet in the cases which seemed most to require it. In proportion as the patient was full, robust and vigorous, and the attack of fever severe, so in general was the rapidity and degree of the debility which succeeded the abstraction of blood. The most astonishing case of this kind which occured, was that of a seaman, the particulars of which you may recollect having been laid before the medical meetings then held in this place. He was a remarkably

markably stout young man, nineteen years of age, in whom the symptoms of head-ach, flushed face, redness of the eyes, and general uneasiness were very severe. It so happened, that other patients were visited on board the same ship the morning he was taken ill, by which the earliest opportunity was given for bleeding. At the time the things necessary for performing the operation were getting ready, he was still walking about, but was desired to sit down on a mattrass placed on the cabin floor as his bed. A vein was opened in the arm while sitting; but no sooner had he lost three or four ounces of blood than supervening syncope compelled him to lie down. In this posture, when about eight ounces more were taken away, he became so extremely languid as to make it advisable to tie up the arm. He never again got up, for, from that moment he continued feeble, and debility advanced progressively in spite of every thing given to obviate it, till the third day, when he died. Though it is possible this case might, under any treatment, have terminated in death, is there not reason to think that things were brought much sooner to a fatal crisis by the loss of blood? It seemed as if the powers of life had been so exhausted by it, as to be incapable of being again roused into action. The lancet was employed without evident mischief in the most favourable cases only; those in which the symptoms were so mild, that the patient must have done well under any treatment, or if left to himself. The practice could not have a fairer trial, nor a better opportunity of being brought into repute, had it been found beneficial, than at the time here alluded to: the general result convinced all the practitioners then resident in Kingston, whose opinions were worth taking, that bleeding is a remedy which in no case of the fever of new-comers is productive of good; but in most cases, of much evil.

I am, &c.

Kingston, Sept. 20, 1802. CHARLES MAC LARTY.

Extract of a Letter from Dr. Burke.

Dear Sir,

Subjoined I send you the names of those persons with whom I have employed mercury as a prophylactic against the malignant pestilential fever of this country. Some were seized with it at an earlier, others at a later period, after the use of mercury, and all recovered. But I have constantly remarked, that those who laboured under ptyalism,

ptyalism, at the first attack of fever, had much milder symptoms, and recovered more speedily. I have treated many more according to this plan with equal success, but cannot, at present, bring their names to my recollection.

I am, Dear Sir, &c.

Kingston, Oct. 11, 1802. WM. BURKE.

To Doctor JOHN HARRIS.

Names of those treated according to the prophylactic plan.

J. P. Malony, Esq.	P. Aylward
James Dewdney	Thomas Shea
Wm. Coppinger	James Shea
Ludovick Morisey	William Gow
James Tyrell	Rev. Mr. Supple
Edward Tyrell	Robert Blair.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

AS it has been a prevailing opinion among medical men, that no two diseases could exist and go through their different stages, in the same person, at one time, I am induced to transmit you the following cases to be inserted in your valuable Journal, if you think them sufficiently interesting. I am, &c.

Marlborough, Dec. 8, 1802. J. MAURICE.

I was requested to inoculate a child in this town with vaccine virus on the 16th of September, at which time the measles were very prevalent here and in the neighbourhood. On the third day after inoculation, this child was attacked with the usual symptoms of measles, the eruptions appearing on the sixth day after vaccination. I particularly attended to the state of the arm, but could not discover the smallest variation from its regular progress, neither were the symptoms of rubeola in the least lessened or retarded. On the 24th, another of the same family was vaccinated, which was also seized with the measles; both diseases went on regularly as in the former case, only that this child suffered much from a pneumonic affection, which can only be attributed to that disposition, which measles in

in general have to produce such complaints. I have not been so particular as to state the daily progress of the diseases, because it could not tend to prove any thing more than I have already advanced.

Wishing to ascertain what effects might be produced by inoculating others, or whether one or both diseases may be communicated, I accordingly took MATTER* from the arms of these children, and inoculated another family, consisting of the mother and five children; the children went through the usual stages of vacciola, and without one symptom of rubeola.† But the mother did not receive the infection, notwithstanding several attempts were made. She informs me, that when an infant, her mother caught the small-pox, of which she died; but no one ever discovered that she (the infant) had a sympton of the disease.

In the course of my practice, I have met with two or three cases similar to this; where I could not communicate the vaccine disease, although repeated attempts were made with the most recent virus. I do not know how to account for this phenomenon‡; as it has been clearly proved by the Rev. G. C. JENNER and others, that persons who have had the small-pox may be infected with the cow-pox.

As much has been already said by so many able practitioners, respecting the superior advantages the vacciola possesses over the variola, the following will afford nothing new, but only tends to corroborate it still further, for which reason I lay it before you.

On the 26th of October, the small-pox made its appearance on a young man of the parish of Chissleden, who caught the contagion in London. The alarm was consequently great, and it was determined to inoculate all those who were supposed to be in danger, many of whom were relatives of this poor man, and lived under the same roof.

The medical gentleman, who attended this man, promised to inoculate them immediately, which he neglected doing.

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* The matter was taken on the 9th day of vaccination, when the morbillous eruptions were at their height.

† May not this be sufficient to prove that every virus is sui generis, and that the vulgar notion of scrofula being communicated by small-pox inoculation is highly improbable; in my opinion, it is only excited into action by the small-pox.

‡ Except that the want of susceptibility in some constitutions to receive either the variolous or vaccine diseases may be considered as the cause.

doing. On the 30th they made application to me, when I vaccinated fourteen in number, some of whom, wishing to give it a fair chance, (as they termed it) lived in the same house with the variolous patient, two days previous to his death, where they still reside. The poor man died the 4th of November, being the ninth day after the eruptions became visible. Every one of these patients went through the vaccine disease without any interruption, and it is to be remarked, that although several of them were exposed to a variolous effluvia, yet no pustules appeared.

Out of nearly two hundred patients that I have vaccinated, not one of them has suffered materially from inflammation of the arm.

P. S. Since the above was written, several poor people of the same parish have inoculated themselves with vaccine virus, by means of a razor, making a long and deep incision; consequently, they have very bad arms, which is owing probably to the improper mode of inserting it; for, Dr. JENNER asserts, "that when the adipose membrane is wounded, a violent disease is produced," or, from the matter being taken at an improper period. These circumstances, I fear, may be the means of bringing the vaccine disease into disrepute.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I AM happy to find your anonymous Correspondent, whose letter appears in your last Number, Vol. VIII. p. 505, is inclined to adopt my opinion of the sedative properties of opium, for if our ideas coincide on this great and leading question, other differences will be easily adjusted, or will be of no real importance.

"I am inclined," (says he) "too, to adopt his opinion of the sedative properties of opium; but cannot help thinking that, in his investigation of its modus operandi, (a question in the highest degree recondite, and perhaps of very little practical utility) he has been led into many hasty assertions, and has drawn some unfounded conclusions. His censures of Dr. CRUMPE's Treatise appear unwarrantably severe, and needed

needed not the additional aid of *italics* and *capitals* to render them more pointed."

The first charge of having been led into some hasty assertions, may possibly be well founded, because the plan I have adopted of publishing a series of connected observations in detached parts, is attended with some disadvantages; and I have not yet examined the different papers with that attention it would require to detect them, if there be any: but I am not aware of that being the case, and am still less conscious of having drawn any unfounded conclusions, or of having been unwarrantably severe in my censures of Dr. Crumpe's Treatise. I shall therefore avail myself of the privilege allowed in all courts, of pleading not guilty, till some proofs are brought in aid of the accusations. How far your correspondent has avoided those errors, which, without adducing one single proof, he has attributed to me, remains to be seen.

With regard to the modus operandi of opium being a question in the highest degree recondite; the terms in which I have expressed myself in the different pages of your Journal, (see Vol. vii. p. 355—358, 497—506; Vol. viii. p. 330) render it both improper and uneccessary for me to enter into it as an abstract question.

So far am I from agreeing with him in thinking it a question of very little practical utility, I am of opinion, that if there be a physiological question which involves in it more momentous consequences than any other, it is that which relates to the modus operandi of opium.

Can it be supposed, that a question which has engaged the attention of philosophers and physicians, in almost every age and country, since opium became known as a medicine, is of very little practical utility? A question which has exercised the skill and ingenuity of men so celebrated as Drs. Mead, Alston, Whytt, Monro, Langrish, Cullen, Johnstone, Young, Darwin, Brown, and Heberden, in our own country; to which a long list of men, equally famous for knowledge and skill, in other countries, may be added, such as Tralles, Fontana, &c. &c. Nor would it be just, on the present occasion, to omit the names of Drs. Currie, Alexander, and Wilson, (the two latter of whom, in particular, have added greatly to our stock of knowledge, by the publication of their ingenious and accurate experiments on opium). Can it be supposed, I say, that these men, and a great number besides that I am unacquainted with, have been wasting their time and talents upon a question of very little practical utility? Such an

idea would, in my opinion, be absurd. Indeed, it is only necessary to consult the works of the different writers who have favoured the public with their sentiments on the subject, and especially those of a recent date, to be convinced of the urgent necessity of its being ascertained by the fullest and fairest investigation, whether opium operates as a stimulant, or directly as a sedative.

One consequence of its being considered as a stimulant, is, that all those substances which, like opium, immediately diminish and ultimately destroy the sensibility, irritability, and mobility of the body, such as cicuta, belladona, hyoscyamus, nicotiana, lauro cerasus, camphora, æther, volatile alkali, musk, thea, alcohol, &c. &c. are considered by many writers as stimulants also;* a fact which, I think, fully demonstrates the extreme importance of the question.

There are other points to which I must now beg leave to call your attention. C. C. W. proceeds as follows:

"In his last letter, Mr. Ward has himself advanced an assertion, which appears, *prima facie*, most glaringly false and untenable: namely, that alcohol is a sedative. Now, the purport of this letter is, to request that gentleman to state the arguments which he considers as corroborative of his opinion."

Would any one who reads the above passage, suppose that I had already advanced either arguments or proofs in support of the assertion? I think not.

I find however, upon referring to vol. vii. p. 127, that I have made use of the following arguments.

"Another inaccuracy they seem to have fallen into is, their taking it for granted that wine and alcohol are stimulants, and reasoning upon that supposition, though this is also a disputed point; and Dr. Cullen, after a close investigation, places them in the class of narcotic sedatives."

The following quotations then appear in a Note:

"It is, however, as containing alcohol, that wines are to be considered as medicines; and the considering them as such, we have reserved for this place, in which I have put them as narcotic sedatives. That alcohol is such, can hardly be doubted; as, when only diluted with water so much that it can be swallowed, it shows the inebriating, intoxicating,

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* Darwin's Zoonomia, vol. ii. p. 678, 692, 693. Brown's Elements of Med. vol. i. p. 103, 104; vol. ii. p. 6. Beddoes's Hygeia, No. viii. p. 26. Med. and Ph. Journal, vol. vii. p. 525, 526; vol. viii. p. 50, 53. Noble on Ophthalmia, Part ii. p. 154, 188, 217, 218.

intoxicating, and narcotic effects of other sedatives. When taken in small quantity, and much diluted, it does not indeed immediately show its sedative power; but, on the contrary, it may appear as a stimulant, cordial, and exhilirating liquor. As these operations, however, are in common to it with opium and other narcotics, they do not contradict our opinion of its proper sedative nature." Cullen's Mat. Med. vol. ii. p. 315, 16.

Alluding to wine, he says, p. 317, "It is difficult, however, to set the limits between its stimulant and sedative powers; and if the quantity of it be gradually increased, the latter gradually come on, and concurring with the former, produce at first a degree of delirium or ebriety, which is generally of the cheerful kind, and which occupying the mind, excludes all thoughts of care or anxiety; but the same sedative power, carried on still further, renders the delirium more considerable, and gives that irregularity and confusion of thought, which is the state of intoxication; and at length, the sedative power entirely prevailing, the animal functions, both of sense and motion, are gradually weakened, and the person falls asleep."

Upon referring to vol. viii. p. 339, 340, 344, 345, I find that I have related eight experiments also; three of which are taken from Dr. Crumpe's Treatise, and five from Dr. Monro's Paper on Opium, &c. in the Ess. and Obs. P. and L. vol. iii. They are as follow:

Exp. 34. "Employing rectified spirit of wine in the same manner as the other articles (namely opium and spirit of hartshorn) in the two preceding experiments, I found it succeeded,* by similar consequences, in three minutes."

Exp. 38. "Rectified spirit of wine deprived a third of all power of motion in three minutes."†

Exp. 40. "Having extended the limbs, and tied down a large frog on its back, I opened the thorax just so as to bring the heart into view; its pulsations were 62 in a minute. I then injected into the anus, by means of a small syringe, some rectified spirit of wine; but the quantity of which could not be exactly determined, as some of what had been injected was again discharged. Leaving the animal in this situation, I attended to the changes induced in the heart's motion; and reckoning its pulses at the periods mentioned

* In depriving the limb of all sensibility and power of motion.

† The heart of a frog separated from the body, was employed in this experiment.

in the first line of the following table, found their number to be as is set down in the second:

In —	2	5	10	15	20	25	30	35	40	45	50	55	60
The P. was	62	62	62	52	46	44	42	40	36	36	34	32	32

" Sixty minutes elapsed, the animal was in external appearance dead, although the heart still continued to beat, and was thrown out."

The above experiments are taken from Dr. C's Inquiry. The five which follow, from Dr. Monro's Essay.

(Four Trials.)

" About seventy drops of a mixture of equal parts of white wine and French brandy were applied on lint to the hind extremities of a frog. In seven minutes the animal was observably affected, and its heart beat only fifty times in a minute. In a quarter of an hour, the heart beat only forty-five times in a minute; yet the rapidity of the blood in the hind feet was not very observably lessened. After twenty minutes, the heart beat only forty times in a minute, and the creature was much stupefied. After half an hour, the heart beat only thirty-five times in a minute, and evidently with less force than natural; now the circulation was considerably less rapid in the vessels of the hind feet, and the creature was scarcely able to withdraw its legs when the toes were pinched. After three quarters of an hour, the heart contracted but thirty times in a minute, and the motion of the blood in the vessels of the hind feet was extremely slow, and ceased altogether after fifty-five minutes, at which time the creature was unable to withdraw its legs from the most severe injury; or when the eye ball was fretted with a probe, to shut its eyes, which were wide open; and its respiration had entirely ceased. I now removed the mixture and washed the legs in water; notwithstanding which, it remained insensible for about an hour and a half longer, although the heart continued the whole time to vibrate, feebly indeed, about thirty times in a minute. But after this it began to bend the joints of the hind legs spontaneously; and in forty minutes more was able to scramble over the edge of the plate on which it was laid; yet, till half an hour after, when the heart contracted forty times in a minute, the progressive motion of the blood in the feet was not renewed. Thus, the animal gradually recovered its sensibility and motion, and the blood its free circulation; after three hours more, or about the end

end of the seventh hour from the beginning of the experiment, it could jump with almost its wonted vigour, and the motion of the blood in the feet appeared free and rapid.

When the mixture was applied to one leg only, that leg seemed to be somewhat, but not very considerably, more benumbed than the other; yet the circulation did not cease sooner in the one than in the other leg." Ess. p. 340, 342. " Compare Dr. Alexander's 20th, 21st, 22d, and 23d Experiments.

As C. C. W. asks for farther proofs, I will introduce the Experiments to which I have referred.

Experiment 20.

H. M.
5 0 Sterno ranæ adultæ sedulo ablato, corde exscisso, quinquaginta guttæ solutionis potentis (opii) in ventriculum, vitreo syringe, injiciebantur; complures evasere.
0 15 Animal haud parum stupefactum; extrema extensa et fere paralytica videbantur.
0 20 Animal convellebatur. Cultri acie extremis punctis, sensatio excitatur.
0 40 Facultas voluntarii motus penitus extincta; at, ubi contactum est, convellebatur.
6 10 Animal mortuum. Nihil motus aut sensationis excitari potest.

Musculis denudatis, stimulus frustra adhibebatur; nervo crurali diviso, et deinde compresso, nihil contractionis sequebatur.

Experiment 21.

Triginta ejusdem solutionis guttæ, in ventriculum alius ranæ injiciebantur, corde antea remoto, pariter ut proxima convellebatur, et paulo post horam et quindecim minuta, e vita excessit. Post mortem nihil vis contractilis ulli musculorum omnino superfuit.

Experiment 22.

Viginti guttæ in ventriculum alius ranæ injiciebantur. Hora duodecimque minutis elapsis, animal mortuum est. Post mortem nulla vis contractilis signa musculi exhibuere.

Experiment 23.

H. M.
6 45 Quinquaginta guttis *spt. vin. rect.* in ranæ ventriculum injectis, corde ut supra remoto.

Animal

H. M.
7 0 Animal stupefactum, et lethargicum ; at stimulatum, sensationem adhuc retinet.
0 50 Animal moritur. Musculis nudatis, et irritatis, et crurales nervos premendo, et stimulum musculis adhibendo, nihil contractionis excitabatur.

Hinc deducendum,

1mo. Spiritus vini rect. et opii in ventriculum injectionem, corpora ranarum, quarum corda remota fuerant, pariter afficere.

2do. Partes remotas æque ac partem cui injectio adhibeatur, affectas esse.

3tio. Hac operatione, vim contractilem fibræ muscularis deleri.

4to. Nec ad hoc efficiendum, circulationis auxilio esse opus. Dissert. Inaug. de Opio. p. 28—31.

The experiments (twelve in number) and arguments above transcribed, prove satisfactorily to my mind, that alcohol acts directly as a sedative: but, at any rate, they prove, (which is sufficient for the present purpose) when compared with the preceding and subsequent experiments, and taken in conjunction with a great number of remarks, quotations, and references, which occur in the different papers on this subject inserted in your Journal, that it acts in the same manner as opium, (indeed this is a point which has long been settled) and C. C. W. expressly says in his letter, " I am inclined to adopt his (Mr. Ward's) opinion of the sedative properties of opium :" he must, therefore, either admit that alcohol is a sedative, or it will be incumbent upon him to shew, that its modus operandi is different to that of opium.

Now, I contend that the arguments and experiments related above, and which had been given before, or referred to, are so numerous and demonstrative, that it is impossible to consider them in the light of *prima facie* evidence ; we must therefore suppose they had escaped the notice of your Correspondent.

The following passage in my last paper (vol. viii. p. 392) will clearly prove that I did not by any means consider them as deciding the question.

" It is allowed on all hands, that alcohol operates in the same manner as opium ; and I shall now consider it as an established fact, that the mod. op. of the latter, and of course of the former, is directly sedative." And, in a note, I have said (and to this I wish particularly to call your attention)

tention) "Farther proofs may be thought necessary, and these I shall endeavour to supply in a succeeding paper."

This promise I always intended, and still intend, to perform. But I must now go on to reply to the concluding paragraph in C. C. W's letter. It is as follows:

"But that we may not dispute about terms, I would likewise beg the favour of him (Mr. Ward) to give his definition of the terms stimulant and sedative: for if the former term be applied, as it most commonly is, to certain substances which excite, for a time, the action of the heart and arteries, increase muscular power, and the sensorial functions, I do not perceive how he can possibly exclude alcohol from the list, unless, indeed, he consider the state of debility consequent on drunkenness as a proof of its possessing a direct sedative power; if so, his judgment is, I apprehend, widely different from that of other physiologists."

It plainly appears from this passage, that your Correspondent has a short memory, and so far has a claim to be considered as a great wit: (for candour forbids the idea that he would censure my remarks as hasty, unfounded, and unwarrantably severe, without having previously perused them.)

In support of the assertion, I beg leave to refer you to vol. vii. p. 127, 128, where I find I have expressed myself in the following manner:

"The subject seems to have been rendered more intricate than it really is, by the advocates for the stimulant doctrine not adhering to a precise definition of the terms, stimulants and sedatives.

"The following definitions appear to me to be unexceptionable; and I must beg to be understood to allude to them, whenever I make use of either of those terms."

"This then is the general idea of stimulants, that they are powers capable of increasing the mobility, and of exciting the motion of the nervous power." Cullen's Mat. Med. vol. ii. p. 131.

"Sedatives. These are the medicines which diminish the sensibility and irritability of the system, and thereby the motions and powers of motion in it."* Idem. p. 217.

Adhering

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* The Editors request those Correspondents, who may be disposed to favour them with their sentiments on this difficult subject, to give their names at length, as Mr. Ward has done. They take the liberty also, of reminding their friends, that no disputed point can be adjusted while the Disputants are employed

Adhering to my original definition (or rather to Dr. Cullen's definition) of the term stimulant, which it will be easy to shew is far preferable to that your Correspondent seems inclined to adopt; I do not see that it is at all necessary, because I exclude alcohol from the list of stimulants, that I should consider the state of debility consequent on drunkenness as a proof of its possessing a directly sedative power. The idea I have always annexed to a substance acting directly as a sedative, (and I have always supposed both opium and alcohol to act in this manner) is, that it immediately diminishes the sensibility and mobility of the system, without these effects being preceded by any symptom of increased excitement, and have more than once expressed myself in words to that effect (see vol. viii. p. 336, 337); and we have only to turn our attention to the experiments above related, to be convinced that this is the mode of operation of alcohol.

A similar inference may be drawn from the following experiments of Fontana.

"Leeches immersed in spirit of wine died in two or three minutes.

"I plunged half the body of a leech into sp. of wine, and found in a little time that this part had lost all motion, whilst the other half continued in action. The experiment succeeded in the same way, whether the part of the leech toward the head was plunged or that towards the tail.

"The same consequences ensued on plunging a leech into the solution of opium in sp. of wine, or into the solution of it in water; and I looked upon it as something very extraordinary, that one half of the creature should become dead, whilst the other half continued in the state of not having undergone any change, or suffered any injury.

Injections made into the Anus of Turtles.

I injected three turtles of the same size, at the anus, by means of a glass syringe. On the first of them I tried sp. of wine, and in a few minutes it could scarcely stir. At the end of an hour it was quite dead.

"I injected the second with an equal quantity of a strong solution

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employed on *different* subjects; or while the matter in question is not acknowledged by both parties to be the same. They doubt whether any advocates for the *stimulant* doctrine would admit the first of the above definitions; and it appears that the advocates for the sedative opinion will not admit the definition given by C. C. W. therefore no legitimate dispute can exist between them at present.

solution of opium in sp. of wine, and in half an hour, it scarcely seemed alive or able to stir: It died at the end of the seventh hour, but the motions of the heart continued for an hour after.

"I injected the third with the same quantity of the aqueous solution (of opium): It was very lively at the end of the sixth hour, and survived the sixteenth.

"I have, however, observed in general, that turtles do not die when injected at the anus with the solution of opium in water. Those I injected with the spirituous solution, all died in less than three hours: *The injection was scarcely made when they lost their strength and vivacity, and in half an hour they almost ceased to give any signs of life.*"*

Injection made beneath the Skin of Turtles.

"I made an opening with a lancet in the skin betwixt the legs and belly of a turtle, and injected within it spirit of wine. *In a few seconds the turtle became motionless,* and died in less than an hour.

"I injected another turtle in the like way, with an equal quantity of the spirituous solution of opium. *In seven minutes it became without motion,* and died at the end of four hours."

"I injected a third with the aqueous solution of opium. It continued lively for two hours, but died at the end of the eighth.

"The result of a repetition of the same experiments on nine other turtles, was perfectly analogous to that of the foregoing."

Turtles in which the Heart was laid bare.

"I stripped the pericardium from the heart of a turtle, and applied to it sp. of wine several times successively. *In twenty minutes it had lost all motion, notwithstanding the animal continued alive. It died, however, in less than an hour,* WHEN NO PART OF ITS BODY WAS ANY LONGER IRRITABLE.

"I applied the spirituous solution of opium to the heart of another turtle, prepared as above. *In half an hour it was become motionless,* EVEN TO STIMULATION. The animal died at the end of three hours.

"I applied aqueous solution to the heart of another turtle,

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* I am sorry your Correspondent seems to have a dislike to italics and capitals, because I think them highly useful on many occasions; and on some, that they are indispensably necessary.

tle, and it continued its motion perfectly well for two hours: it still stirred a little at the end of the sixth. The turtle lived eight hours.

"I laid bare the heart of another turtle, and sprinkled it successively with several drops of sp. of wine. *The two auricles* INSTANTLY *ceased to move, and the heart* IN LESS THAN TWO MINUTES *had no longer any motion,* EVEN WHEN STIMULATED. *The turtle lived a long time in this state.*"

Turtles, the Hearts of which were detached from the Thorax.

"I removed the heart of a turtle from the thorax, and covered it with spirit of wine. *Its motion ceased in a few minutes.*

"I put the spirituous solution of opium on the heart of another turtle. In the space of a quarter of an hour there was scarcely any contraction of it, and in twenty-six minutes, it no longer stirred, *even when stimulated.*

"I plunged the heart of another turtle into the aqueous solution. It still continued to move, but not forcibly, at the end of half an hour. In two hours all was at rest.

"I plunged another heart into *simple water, and it still retained a little motion at the end of the third hour.*"

Frogs injected beneath the Skin.

"I injected a frog beneath the skin with sp. of wine. *It died in a minute after.*

"I injected a second with the spirituous solution of opium, and in a short time it could not support itself on its feet. It however was able to crawl a little at the end of thirty-five minutes, and died on the fortieth.

"I injected a third, with the aqueous solution of opium. In the space of ten minutes it scarcely stirred, and had its legs stiff and extended. It died in forty minutes."

Hearts of Frogs separated from the Thorax.

"I put the heart of a frog into sp. of wine. *Its motion ceased in two seconds.*

"I put a second heart into the spirituous solution of opium. *It ceased to move in twenty seconds.*

"I put a third into *pure water. It continued in motion for forty minutes.*

"I put the hearts of three frogs into pure water. The motion of one of them ceased in twenty-one minutes; *but it spontaneously recovered its oscillations, and that repeatedly.*

"The

" The second lost its motion in ten minutes, *but recovered it of itself.*

" The third ceased to move *at the end of fifty minutes**." Supplement to Fontana's Treat. on Pois. vol. 2. p. 364—374.

For the remainder of the experiments on this subject, see the last part of the Supplement, p. 375---395.

The following Experiments are taken from Dr. Alexander's Thesis.

CAPUT. I.

An Edit Effectus in Fibram Muscularem?

Sect. I.

" Solutio crudi opii, ad rationem unius drachmæ ad unam aquæ unciam, facta, et percolata, residuum in chartula unius scrupuli quatuorque granorum reliquit, ideoque triginta et sex grana opii tantum dissolvebantur. Hujus solutionis semuncia, ad temperaturam quadraginta et quatuor reducta, viz. ad rana temperaturam. Cujusdam ex istis animalibus vivi, thorace aperto, cor remotum vicies et quinquies in sexagesima parte horæ, se contraxit.

Experiment 1.

H. M.	
12 0	" Cor in hujus solutionis immersum fuit semunciam.
0 2	Cordis contractiones multo minuebantur, quippe quæ jam quindecim haud superavere.
0 8	Contractiones destiterunt. Cor a fluido remotum mechaniceque stimulatum, nihil omnino contractionis ostendit.

Experiment 2.

12 20	Cor pari modo alia rana exscissum, in semunciam spiritus vini immersum, dum se ter decies in sexagesima horæ parte contraheret.
0 22	Prima immersione, tres vel quatuor contractiones potentes exhibuit, at exinde nullas. Fluido detractum, et arte etiam stimulatum, nullus tamen ciebatur motus.

Experiment

* The remarks afterwards made by Fontana would tend to weaken the effect of the above experiments, had they not been confirmed by other Experimentalists.

H. M. EXPERIMENT 3.

1 0 Cor tertiæ ranæ eadem operatione, ac primæ, exscissum, quod vicies et quater in sexagesima horæ parte contrahebat, in semunciam aquæ distil. temp. 44 immersum est.

0 2 Cordis contractiones post immersionem crebræ pariter ac antea fiebant.

0 16 Jam cessavere contractiones, cum corde remoto et vitro horarii sicco superimposito, mechaniceque irritato, contractiones per decimam horæ partem non destitere. Eadem experimenta cordibus cuniculorum repetita erant.

EXPERIMENT 4.

10 0 Cuniculi vivi mediæ magnitudinis conciso thorace, cor removebatur. In solutionis temperaturæ coeli unciam immersum, vicies et ter in sexagesima horæ partæ contrahebat.

0 4 Octodecim fiunt contractiones.

0 10 Sex vel octo in sexagesima horæ parte perlanguidæ contractiones.

0 12 Contrahi cessatum. Cor fluido eductum, mechaniceque irritatum, nihil tamen motus visum est. Hoc experimento sæpe repitito, cor unum spatio octo horæ momentorum quievit; alias tamen multas contractiones exhibuisse, post quindecim momentum, clare constabat.

EXPERIMENT 5.

11 0 Alius cuniculi cor in unciam *spt. vin. rect.* immersum.

0 2 Complures acres contractiones statim secutæ sunt, quæ jam haud parum defecere.

0 9 Nihil contractionis visum: cor eductum mechaniceque stimulatum, paucos languidos motus exhibuit.

EXPERIMENT 6.

11 30 Cuniculi vivi cor thorace exscissum, in aquam temperatura coeli immersum, quinquagies in momento horæ contrahebat.

0 34 Contractiones sæpe repetuntur.

0 40 Contrahebat languide; triginta tamen motus in sexagesima horæ parte numerantur.

0 50 Nihil motus visum. Cor remotum, et sicco vitro superimpositum mechaniceque stimulatum, per decem minuta contrahere perstitit."

The

The above experiments are, I presume, amply sufficient to shew, that I have at least made one assertion that is neither hasty nor unfounded; namely, that alcohol is a sedative; but I have several other experiments and arguments, at least as decisive, to advance in support of the assertion; but must defer them at present, fearing that I have already trespassed on the limits of your Journal.

I am, &c.

Manchester, Dec. 9, 1802. M. WARD.

To the Editors of the Medical and Phyſical Journal.

Gentlemen,

THERE are few, I believe, of the junior practitioners of Medicine, (to whom the treatment of Venereal Cases generally falls) who must not have had frequent experience of the inefficacy of all topical applications in the virulent Gonorrhœa. The injection of a solution of white vitriol, (the zincum vitriolatum, or sulphat of zinc) in the proportion of about a grain to each ounce of water, though perhaps one of the most active and successful, I have found, in persons of irritable habit, to produce, occasionally, great pain, an increase of the discharge, and a peculiar liability to swelling of the testicles. In the year 1795, I had occasion to prepare, for a chemical experiment, a quantity of the crystalized acetite of zinc, and used it in a few cases of Gonorrhœa, that were found to resist the ordinary remedies. The success of this application exceeded my expectation, and far surpassed that of any injection, the use of which I had ever witnessed. In the winter of that year, I took with me to Edinburgh, a quantity of the acetite of zinc, and gave portions of it to various persons; among others, to my friend, Mr. George Bell, the son of Mr. Benjamin Bell, and now an eminent Surgeon in Edinburgh. What was the result of his trials of the remedy, I really forget; and, indeed, whether he ever tried it or not. But, satisfied of its superior efficacy, I have continued to use it from that period to the present, as the best application in all cases of Gonorrhœa, and very seldom with any but the most favourable issue. From ample experience, I have of late felt myself justified in recommending the remedy to several medical friends;

and

and the event of their practice has fully accorded with my own. Among others, Dr. Ferriar and Mr Gibson, have testified the superiority of this remedy over all others, and after the failure of various other injections.

The acetite of zinc may be prepared in any of the following modes:

1. Let zinc, which may be bought at the brazier's, under the name of spelter, be melted in an iron ladle, and poured from a considerable height into a vessel of cold water. It will thus be minutely divided, or granulated; and if the operation has been unskilfully managed, may be divided still farther by a pair of strong shears. Let the finest parts of this granulated metal be added to a quantity of distilled vinegar; or, what is still better, of the acidum acetosum of the London Pharmacopœia, diluted with six, or eight parts of water. Shake or stir the materials together frequently; and, when the acid has lost all its sourness, which will happen in a few days, let the liquor be slowly evaporated. On cooling, it will shoot into crystals of a similar colour to those of sugar of lead; or into nearly white ones, if the acidum acetosum has een the solvent.

2. For metallic zinc, the white sublimed oxide (flores zinci) may be substituted, using the same solvents as before; and the chemist will find it advantageous to employ the gritty part, which is less fit for use as an internal medicine.

3. To a solution of white vitriol (zincum vitriolatum) in six or eight times its weight of water, add a solution of the acetite of lead (cerussa acetata) in twice its weight of water, as long as any precipitation ensues, or a little longer, in order to ensure the complete decomposition of the white vitriol. Throw the whole upon a linen strainer, and wash off the soluble part by repeated affusions of distilled water; then evaporate, and crystalize as before.

The crystals of acetite of zinc, may be obtained by very cautious and slow evaporation, of a distinct and regular form; but, for medicinal use, this nicety is quite unnecessary.

For the purpose of an injection, I generally use eight or ten grains, dissolved in four or six ounces of water, or, what is much better, in the same quantity of a thin mucilage of quince seeds, or of decoction of linseed, or of barley. The strength may be increased or diminished, as may be found expedient; but such a proportion as excites a slight smarting, I consider as rather favourable to the cure.

A solution

A solution of the salt, in smaller proportion than that above assigned, in rose water, forms an excellent eye-wash. The medicine may also be exhibited internally, (as my father has frequently done) in all cases in which the calcined zinc has hitherto been employed, and with more certain efficacy. In the dose of from 5 to 10 grains, it affords a safe emetic, which operates speedily.

It is but justice to Mr. Benjamin Bell to acknowledge, that since I began to use the acetited zinc in Gonorrhœa, I have observed, in the Appendix to his Treatise on the Venereal Disease, a formula for preparing a similar injection, extemporaneously, by the mixture of the sulphate of zinc with the acetite of lead. I apprehend, however, that it will be found much more convenient to keep the acetite of zinc ready prepared; that the strength of the solution will be more certainly regulated; and its freedom, from contamination with white vitriol, better secured. I am, &c.

Manchester, Dec. 5, 1802. WILLIAM HENRY.

P. S. The acetite of zinc, when administered internally, should be that which has been prepared by the direct combination of the metal, or of its oxides, and not by double affinity; as deleterious effects may be produced by a redundancy of the acetite of lead.

Observations on the Use of Zincum Vitriolatum; communicated by Mr. Elijah Impey, *Surgeon, Royal Navy, Member of the Royal College of Surgeons, London.*

WHILST our Navy continued off the coast of Egypt, many cases of dysentery occurred on board the ship I was surgeon of, in the primary stages of which there did not occur any peculiar symptoms or method of treatment to merit remark: Tenesmus, griping, discharge of mucus mixed with blood, and hardened scybalæ were removed by laxatives, enemas, diluent mucilaginous drinks, with attention to cleanliness and regimen; after which there existed an extreme degree of atony, and frequent discharge of fæces without pain. To obviate the latter, tonics, corroborants, and astringents were assiduously administered; in the list of which, I beg leave to assure you, there did not appear any medicine of such singular utility and efficacy as the zincum vitriolatum combined with opium.

Edinburgh, Dec. 1, 1802.

Curious Case of Ovarian Gestation; communicated by our Correspondent at Paris.

THE subject of the observation was brought from the Hotel Dieu to the dissecting room of the Medical School; but owing to the industry of the student and reporter of the case, some of the circumstances of the life of the person have been ascertained, which tend to render the account still more curious and interesting. Among a number of subjects brought for dissection, was a girl of thirteen years of age, and remarkable for the extraordinary state of emaciation of her body, the leaden colour of the skin, the sunken eyes, and the elevation of the zygomatic arches. The breasts were not the least develloped, and the abdomen not at all raised, or any appearance of fullness. The mons veneris was unfurnished, the labia externa hardly existed, but the clitoris was very large, and the hymen, which was perfect, hardly admitted, notwithstanding the fluid state of the parts, of the introduction of the point of the little finger. On opening the body, all the abdominal viscera were found to adhere. At the left side of the cavity was a pouch contracting in the middle, so as to appear like two lobes. This pouch or cyst, resting on the brim of the pelvis, thrust upwards the intestines, and pressed on the ureter, which was large, and filled with urine as well as the pelvis of the kidney. The great diameter of this tumour was about eight inches, and its smaller about five or six; on its outer surface was an opening or communication between the cyst and the cavity of the abdomen; both cavities contained a purulent liquor of a greenish yellow colour. Corresponding to the exterior contraction, a membrane was thrown across internally, which divided the pouch into two cavities, that communicated by means of a considerably large opening; in the inferior of these, besides some hair, was found a quantity of fat, and the coronæ of teeth, cartilages, and pieces of bones, both long and flat, but without any precise form to distinguish them; there was, however, a piece of the lower jaw, in which were found the coronæ of the molar and canine teeth, and beneath these was perceivable the gelatinous substances intended to form the fangs. This tumour was connected superiorly by a narrow stalk to that part of the lateral ligaments, where the ovarium is usually found, but in this instance, it had totally disappeared on that side; the Fallopian tube was perfect, and ascended somewhat on the

the side of the tumour. The matrix, which was in its natural situation, was uncommonly small, and the right ovarium, somewhat enlarged, had attached to it small exceresences of the size of peas. The contents of the thorax were as usual, except the left lung, which was contracted, of a blackish colour, and solid consistence.

The reporter of this case has been able to ascertain the following facts. Her name, Louis Adelaide D***, was born at Versailles, May 1, 1789; her father, who was a taylor, in poor circumstances, had placed her at the age of five years at the Salpetriere, which she left at ten, to live in Paris with her father till she arrived at her eleventh year, when she was employed by a dealer to run of errands, and which she continued to do six months. She quitted this employment, and was placed with an innkeeper, where a number of journeymen taylors lived, and where she was occupied in the discharge of the meanest offices in the kitchen; from hence she lived as servant to a taylor, where she remained two months, and then apprenticed herself to a bookbinder, whose wife surprized her repeatedly in the act of masturbation, a habit which she acknowledged to have contracted while in the Salpetriere. Her health at last diminishing, she was admitted the 22d Pluviose last, into the Magdalen ward of the Hotel Dieu, where she was treated for that kind of consumption attributed to masturbation. She died the 8th Prairial, without the state of the ovarium being ever suspected.

Many circumstances, not one of which considered isolatedly can be looked on either as rare or extraordinary, concur to render this case interesting. 1st, The youth of the girl. 2d. The absence of menstruation. 3dly, The existence of the hymen and the narrowness of the vagina; and, 4thly, The want of devellopement of the genitals, the clitoris excepted.

Paris, Nov. 26, 1802.

A Division of the Symphisis Pubis, attended with compleat Success in a Case of difficult Parturition, by Citizen Manscey, *Surgeon of Saint Mihiel; communicated by our Correspondent at Paris.*

THE subject of this operation, who was the wife of a farmer of the department of the Meuse, 36 years of age, of a small stature, and whose sister had already been delivered

delivered of two children, piece meal, by means of the crotchet. This was the second time that this woman had been pregnant. The first of which, she was delivered by a surgeon after several days labour; but the child, by the avowal of persons present, was considerably smaller than in the present case.

Cit. Manscey was called 30 hours after the commencement of the pain; he found the woman suffering and nearly exhausted; the pains were yet strong and bearing down; the contractions of the matrix were sensible to the touch, on laying the hand on the abdomen; but the head, which was in the first position, did not stir, and the pains were diminishing. The external labia and adjacent parts were much swollen, which induced the author to conclude that the head was engaged. The parts were in high inflammation, and exquisitely sensible; the umbilical cord hung out to the length of six or seven inches, and had the appearance of lung, yet in a sound state. The summit of the head presented a tumour, hard and elastic, from which the author inferred that the child still lived, but it was impossible to introduce the finger between the head and pelvis except at the extremities of its transverse diameter. The parietal bones were so closely pressed between the pubis and sacrum, that it was impossible to suppose the existence of any part of the brain between them; all efforts to return the head were fruitless, and the author conceived that every circumstance warranted him to conclude the head locked in the pelvis, though it was a case which he knew occurred but seldom, and much less frequent than was supposed some years ago. Believing the child alive, the author first endeavoured to introduce the forceps, which he did separately through the spaces at the extremities of the transverse diameter; but every effort to carry them between the head, sacrum and pubis, proved ineffectual, as well as every trial to move the head by approaching the jaws of the forceps in the direction in which they were introduced. The patient, fatigued by these repeated trials, required rest, and the author left her for some hours.

At four o'clock in the morning of the 17th Thermidor, no progress whatever had been made; the pains became weaker, and the patient lost all courage, so as to cry out to have her belly opened. The author was without assistance or advice; the Cæsarean operation, which he was at liberty to perform, was rendered inadmissible from the high state of inflammation, the excessive efforts and fatigued state of the uterus, and the belief of the head being

locked,

locked, so as even to render it very difficult to withdraw it through an opening in the abdomen. This operation would have been performed by the author if he had visited the patient at an earlier period; but under every circumstance of the case, he decided on the division of the symphisis, the probable success of which was increased by the very particular position of the head.

The operation was done in the following manner, which the author thinks it necessary to detail, as no description is given in any work on the operation of surgery: [*The description is however to be found.*]

The patient was placed on her back, her loins a little elevated, the legs and thighs bent, as in the operation for the stone; the particular position of the bed, obliged the operator to place himself between the thighs. The teguments were kept tense by the index finger and thumb, and with a bistoury he divided the integuments and fat, to about two inches and a half; the opening of one of the external pudical arteries, produced considerable hæmorrhage, owing to the great determination of blood to these parts in this state of the womb; this, as well as some other branches divided in the course of the operation, was stopped by ligature; the symphisis was next divided by carrying the incision from above downwards, first by cutting through two-thirds of its thickness, and then insinuating the finger behind the symphisis so as to direct the bistoury, which, with a second incision, separated the cartilage entirely. The symphisis divided, the author attempted to separate the bones, which he found impossible to do, owing to many ligamentous fasicculi, which lay behind, being undivided. This being done, a gradual separation was effected by pressing on the elevations of the ilia; this was strongly seconded by the pains, which became strong, so that in a short time he could introduce the thumb and index finger, and which nearly equalled two inches. A strong pain soon succeeding, the head descended and protruded at the os externum, and after a quarter of an hour the entire body was extracted, lifeless, and the after birth was followed but by a small quantity of blood.

The author follows up the description of the operation by a detail of the subsequent treatment, in which we find nothing remarkable. The wound was dressed simply, and the edges were brought together by means of a bandage surrounding the pelvis. The fourth day after the operation, the patient was attacked by an inflammatory complaint of the lungs, accompanied by spitting of blood, but

without any fixed pain; this gave way to the antiphlogistic treatment after some days.

On the 26th day after the operation, an inflammation and suppuration appeared under the glutei muscles of the right thigh; and being opened, it was found to descend to the junction of the ileum and sacrum; the suppuration was abundant, but diminished, and was perfectly healed, at the end of a month from the operation. The patient complained during the treatment of a numbness in the extremity on one side, but was soon able to walk with the assistance of a stick, and at length engage in her ordinary occupations. She complains however of an inability to retain her urine (a consequence sometimes of the application of the forceps or of difficult labours), but on dry days and fine weather can contain for a time her urine. Owing to ulceration which had occurred during the cure, some partial adhesions had taken place in the vagina. The author concludes, by justifying his prefering this operation to the Cæsarean, by reasons drawn from the circumstances of this particular case, and which have been already stated, and endeavours to remove some objections advanced against the operation, such as the difficulty of reuniting cartilaginous surfaces, &c. without however declaring himself a decided partizan for the operation.

To the Editors of the Medical and Physical Journal.

Gentlemen,

In your last Number, a Correspondent published a Case, (with an engraving) of an inveterate *Tinea Capitis;* which, it seems, from his account, resisted the common plan of treatment, and the complaint remained nearly stationary.

This disease is always a loathsome one, and in many instances very stubborn. How far it is to be considered as merely *local,* arising from a morbid state of the glands at the root of the hair, or connected with a scrophulous taint in the system, is not my present purpose to enquire into; I shall content myself in relating a successful treatment of it, in a case where the patient had been afflicted for a great number of years; and, if the recital of it is judged to be worthy of notice, you will have the goodness to permit it to occupy a page of your useful Miscellany.

Mrs.

Mrs. B. living near Leicester Square, about twenty-six years of age, had been labouring under this offensive malady for *nine or ten years,* previous to her application to me. She had been treated for it, at different times during that period, but unsuccessfully. Upon first inspecting the head, it exhibited, certainly, a very unpromising appearance; for it was nearly all covered with a thick crust, somewhat resembling the bark of an old tree. I ordered it to be well washed with a lather of soap and water, night and morning, and to be covered with an ointment composed of the ung. picis, with the addition of a very small proportion of hydrarg. muriat. and then to apply a piece of thin oil-skin over the whole, with a view to retain the ointment on the parts affected; and, as I did not chuse to trust altogether to an external application in a case of so inveterate a kind, I prescribed a small dose of sulph. antim. precip. and calomel night and morning, with the pulv. sarsaparillæ twice a day, occasionally interposing a cathartic once or twice a week.

In a few days the crust began gradually to fall off, leaving the surface which it covered in a state of slight inflammation from the action of the ointment, but which soon subsided by applying the ungt. sperm. cet. with a few grains of cerruss. acet. Persevering in this method for three or four weeks, the head was relieved of its *noxious incumbrance*; the hair began to grow again, and the patient had the pleasing disappointment of being cured of a troublesome disorder, which she had too much reason to fear, from its unusually long standing, and the fruitless attempts formerly made, would resist all applications, and prove finally incurable.

How far the internal treatment, joined with the external, contributed to the removal of this disease, I must leave the reader to judge. I am aware, that some practitioners are of opinion, that a *local* application is all that is necessary in the case. However, as I have nothing to do with the disputatious part, I have related the plan adopted, together with the effect produced; and if it serves any purposes of utility in the management of this troublesome malady, under similar appearances, my end will be fully answered.

I am, &c.

Piccadilly,
December 7, 1802.

H. DAVIES.

To

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

IN the last volume of a very popular work, (Public Characters, 1802, 1803,) I read, in the otherwise well-written Life of JENNER, a mistake which feels very unpleasant to me; inasmuch as it goes to charge Government (the naval and military department of it) with a meanness or littleness, which is not correctly stated. It is there said, that the remuneration granted to the two medical men who introduced vaccination into the British garrisons, &c. up the Mediterranean, and one of whom accompanied the late expedition to Egypt, was fifty pounds. The fact is, the War Office have given us two hundred pounds; and in Evan Nepean's letter to me, 5 Feb. 1802, he says, "I am commanded by their Lordships to acquaint you, that they have been pleased to order the Navy Board to repay you the amount of the disbursements which you and Dr. Marshall have made, and to present you with the sum of one hundred pounds in consideration of such services. I am, Sir, &c."

The hundred pounds have been paid, but government yet continues Debtor the disbursements.

Now, there being few medical men who will not read, with great interest, whatever relates to the author of that discovery, whereby England may be said to have furnished to the world new means of health; and to have opened out to medical science a new field for speculation, in which other pleasant fruits may hereafter be gathered than those which we now derive from the dairy, though we may still continue utterly at a loss as to the manner of their growth; and your Journal also being in general circulation, will ye be kind enough to insert the above in it? Medical men may be rather gratified to find, that Government has not treated their profession so scurvily as they might have otherwise supposed.

I ought to mention also, that besides the disbursements not yet refunded, there occurred in my Memorial to the two Offices, the following, perhaps, drawback from their remuneration. "The Governor and a few others at the Rock (Gibraltar) chose to fee us for attendance in their respective families. The master of an American vessel had his ship's company inoculated, and also fee'd us. At Minorca a very liberal fee, presented in the most flattering

and

and affectionate way, for a medical attendance, at the government house, was about equal to what was had from all the other inhabitants. At Malta they propose to send each of us a piece of plate. In Egypt I received a present from one of the Beys, for visiting Turkish officers at his house, and soldiers in the hospitals at Rosetta; he apologizing for its smallness, by saying, that his resources had been diminished by the presence of the French."

"The intention, (I hope it will be considered a candid one) of mentioning these circumstances, is, that if government shall think it right to reward our services (for I think by the laws of our country the profession of the physician is on the footing, perhaps flattering to him, that he cannot make a demand) it may know, that, during our absence from England, *every* hour has not been employed by us in its immediate service.

"Our fees I have not kept an account of; but they did not altogether amount to one hundred pounds."*

No. 54, Lombard Street, I am, &c.
December 12, 1802. JOHN WALKER.

Account of a living Female Child, aged two Months and ten Days, which had been born without Limbs, and which was lately presented to the Society of the School of Medicine, at Paris.

THE lower extremities of this subject were indicated by two small protuberances, situated in little cavities or impressions of the skin. Of the upper extremities, a very short arm was to be seen on the right side; but on the left, there was nothing but an appendix, half as short as the former. On the skin, which covered these two rudiments of arms, a scar or cicatrix of no very deep impression was observed. All the other parts of the trunk were well formed. The mother did not remember to have experienced any particular accident during pregnancy, nor could any traces of the separation of the limbs be discovered in the lochiæ. The child died three days after its having been examined by the society. Cit, Dupuytren, on dissecting it, observed,

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* From this account the liberal remuneration of the Court of Naples, and all the fees obtained in Sicily and Italy, are excluded, as of subsequent date to the subject of the Memorial.

observed, that all the muscles terminated at a certain distance from the above rudiments; the humerus of the arm was entire, and ended in facets or surfaces of articulation. On the left side there was only that part of the os humeri which belongs to the scapula; it terminated in a sort of conus which was closely united with the cicatrix of the skin by means of a very strong cellular texture. In the appendices of the pelvis, which resembled warts, nothing but a cellular texture could be seen, though at the basis there was a bony portion, which was covered with strong tela cellulosa; in which, traces of the principal nerves and vessels could with difficulty be observed. The study of monstrosities, in which the laws of formation, generally adopted by nature, are so variously changed, and the numerous deviations from the established forms of nature, is not a little interesting for physiologists, and is indeed, something more than merely a matter of curiosity. It is from these aberrations of nature, that we may hope to penetrate into the mystery of those laws, which superintend the formation of animated beings; or at least we may, by a due attention to these anomalies, be enabled to guard ourselves against the erroneous hypotheses which certain physiological works contain on that mysterious subject.

To the Editors of the Medical and Physical Journal.

Gentlemen,

I Beg leave to observe, with respect to the last letter of Mr. Pears, that I have never questioned the fidelity of his report; but the evidence of the different persons, which he has thus faithfully reported, is at variance with itself, and with truth; and can be of very little service to any cause.

Happily, however, Vaccine Inoculation requires no such aid. It is now patronized by several crowned heads. The King of Prussia, who long since adopted it in his own family, has now established an Institution for that purpose at Berlin. The Empress Dowager of Russia has also honoured the practice with her peculiar protection. The Emperor of Germany has submitted two of his children to this salutary operation; and the King of Sweden has not only caused his infant daughter to be vaccinated, but also established a Vaccine Institution at Stockholm.

Most

Most of the principal cities of Europe have erected institutions of this kind; and the City of London, if last, will not, I trust, be least in following the glorious example.

The case mentioned by Dr. De Carro is not the earliest instance of Vaccination. On the 6th of August, 1800, I inoculated a child of Mr. Austin, who now lives in Globe Street, Bethnal Green, immediately after his birth, to protect it from the small-pox, under which another child in the same family then laboured. The operation, in all respects, proved successful; and the child has since that time been often exposed to the small-pox with impunity.

I have ascertained, that the cow-pox has existed in Hertfordshire; a county in which we have no record, as far as I can recollect, of its having been noticed on any other occasion.

I am informed by Dr. Crichton, that some vaccine matter, with which I supplied him, has proved successful in South America. It was sent to Demarara, by Mr. Skerrett of Ragmore House in Hampshire, who communicates to Dr. Crichton the agreeable intelligence, that it has been tried with success in the garrison, almost entirely consisting of black people, and in several plantations in the colonies of Demarara and Essequibo; and that it was becoming general in those places. The appearance of the disease was the same as in Europe.

Dr. Waterhouse, of Cambridge, New England, inoculated six persons with two toothpicks, well charged with vaccine matter, which he had received from me, without diluting the matter; and succeeded in every case. He also succeeded with a thread ninety days old, without moistening the matter.

When inoculation is performed with a toothpick, a puncture is first to be made with a lancet; then the point of the toothpick is to be inserted into the puncture, and to be held there some time. Afterwards, the flat sides of the toothpick are to be drawn repeatedly over the puncture, in order to fill it as much as possible with the matter. Previous dilution is not only unnecessary, but is supposed to be one of the most common causes of failure.

Dr. W. informs me, that the first matter with which he succeeded, was not from the Vaccine Pock Institution, as Dr. Pearson supposes; but from the stock of Dr. Jenner, through the hands of Mr. Creaser and Dr. Haygarth. It was preserved on a thread, corked up in a common vial. This he wishes to be published. I am, &c.

JOHN RING.

New Street, Hanover Square, Dec. 20, 1802.

To the Editors of the Medical and Physical Journal.

Gentlemen,

In your Address to Correspondents, in the 41st Number of your Journal, is the following expression : "Dr. Davis, of Bath, complains of injustice in Mr. Cuff's evidence, as detailed in the Report of the Committee on Dr. Jenner's Petition, No. 13, of the Appendix to the Report." Hence I conclude, that you had received a letter from Dr. Davis, containing this complaint, and stating the particular grounds of it; but that you did not think it worthy to appear in your respectable publication.

Having perused a letter of this kind in the Medical and Chirurgical Review, I found some insinuations respecting Dr. Jenner and myself, requiring an answer.

These insinuations are equally scurrilous and illiberal. They tend to call in question, not only my motives for giving such evidence, but also the utility of the practice recommended by Dr. Jenner.

The evidence I gave was, that I did not conceive Dr. Davis had the knowledge of the disease which was necessary; and that he did not know the proper time for taking matter. This opinion I formed from an interview I had with him at Bath, the latter end of the year 1800.

He acknowledged to me, that he had not so much information on the subject as he wished; and that he should be happy to have a little more conversation with me, as he found I knew more of the cow-pox than himself; having been in the habit of delineating the vaccine pustule in its different stages.

Dr. Davis observes, that "the actions of men are often mysterious, until their motives are known."—His own conduct illustrates the truth of his observation. His letter is calculated, not only to defend himself, but also to impeach the character of Dr. Jenner. Yet, I am convinced it will prove harmless to a man, whose name stands too high to need any support from my humble pen; to a man, who will be handed down to posterity with grateful remembrance, as one of the greatest benefactors of mankind.

I know of no reason, but the want of information, which could induce Dr. Davis to ask a stranger to call on him at his residence in Bath. On my return to London, in January 1801, I repeated the substance of my conversation with Dr. Davis to Dr. Jenner; at the same time expressing

pressing my apprehension that we should hear of some mistakes committed at Bath.

To vindicate my conduct from the invidious insinuations of Dr. Davis, that my evidence was fabricated for the purpose of rebutting some strong information, "which might have been unfavourable to Dr. Jenner's views,"—It is only necessary to remark, that this conversation was communicated by Dr. Jenner to a gentleman at Bath, who is well known in the practice of vaccine inoculation, in September, 1801, six months before it was reported by me to the Committee.

It is not the first time that Dr. Davis has cast reflections on the practice; reflections which, in his hands, it has probably too well deserved. If Dr. Davis was anxious for fair representations, why was a case which occurred in his own practice, communicated by a gentleman who had never seen it, and who, by his mode of description, is obviously unacquainted with the nature of the cow-pox, unless he was apprehensive that his own word would have but little weight?

That Dr. Davis has been in the habit of propagating unfavourable reports concerning vaccine inoculation, the Bath Journals, and your own, bear ample testimony; I would therefore seriously advise him, on his own account, to be more cautious in future, lest, after again libelling the new practice, he should again be obliged to read a recantation of his errors.

Vaccine Inoculation is now too well established to be shaken by the breath of idle rumour, fretful spleen, or disappointed ambition: hence, any failure which may hereafter occur, will be considered as a reflection on the practitioner, and not on the practice.

I am, &c.

Newington, Dec. 16, 1802. W. CUFF.

Analysis and Experiments on the Cow-Pock Matter, by Dr. HUNOLDT, *of Cassel, and other German Physicians; communicated by Dr.* NOEHDEN.

1. FRESH cow-pock matter was taken from an entire pustule on the seventh day after inoculation, with a gold needle: it was in a very limpid state. On being applied

to a bit of paper tinged with vegetable blue colour, it produced no change on it.

2. A paper, coloured with vegetable blue, being reddened with acetous acid, assumed on a sudden a blue colour, when it was touched over with fresh cow-pock matter.

3. On drying the paper over a coal fire, the blue colour disappeared, and the paper became red again.

4. The blue streaks, which were produced by the cow-pock matter disappeared entirely some days after, notwithstanding the paper was wrapped up so as to prevent the immediate accession of the atmosphere, as much as possible.—Hence it seems to follow,

1. That fresh cow-pock matter is of a subtle and volatile alkaline or ammoniacal nature.

2. That its virus is decomposed or destroyed by a strong degree of heat.

3. That it likewise experiences a decomposition in common temperature, and at the accession of atmospherical air, either by being oxydated through the oxygen of the atmosphere, or by being neutralised with the carbonic acid contained in the atmosphere. From these circumstances it appears, why cow-pock matter ought not to be taken at too late a period, and after it has lost its limpid appearance; why it is in general preferable to take it from a pustule which is still unopened; for the same reason, it ought never to be mixed with water, or exposed to the breath, for fear of destroying the subtle active parts; and it ought, likewise, to be preserved from the accession of the atmosphere. It is, therefore, advisable to make a small wound, and let the dry matter be made liquid by the blood of the wound. These are Dr. Hunoldt's observations. They are opposed by Dr. Bremer, of Berlin, who maintains, that the nature of the cow-pock virus does not consist in its ammonia, as its efficacy seems not to depend on the presence of this constituent. This he endeavours to prove by the following experiments:

1. Matter taken from different species of ulcers and from small-pox pustules, and from those raised by the itch, &c. being applied to reddened paper, changed the red colour immediately into blue, which disappeared on the paper being warmed.

2. Cow-pock matter was taken from genuine cow-pock, on the 13th, 14th, and 16th day after the inoculation; it was of a considerable degree of consistency, and of a yellow colour, and, according to experience, incapable of causing the

the genuine cow-pock; however, it produced the same change on the colour of the paper.

3. That sort of cow-pock, which had all the characteristics of the spurious kind, produced a blue colour on the same paper.

4. Dry matter kept on threads in glass tubes, closely shut, and preserved for about one twelvemonth, varied the red colour of the paper into blue, on being moistened with pure water, though it is known that such matter will always prove inefficacious in producing the cow-pock disease. Hence it is manifest, that the nature of this poison is not to be sought for in the volatile ammonia, the latter being mixed with different species of pus and other animal substances, and that cow-pock matter, notwithstanding its being still impregnated with that constituent, may prove ineffectual. It seems also obvious, that if the action of the cow-pock matter originated in its volatile constituent, it would be propagated by the atmosphere, by clothes, by the mere touch, &c. Now it is known, that it is only communicated by means of a wound, therefore that supposition cannot be admitted. It is very probable, that we shall never be able to discover the nature of animal poisons by a chemical analysis; we must, therefore, content ourselves with observing their effects, and finding out, by mere experience, the means of preventing their pernicious effects. Dr. Gautieri, in his account of the progress of the vaccine inoculation in the Cisalpine Republic, remarks, that the cow-pock poison may be preserved in its perfect efficacy for four months, particularly under an idioelectrical receiver: it would appear, as if the matter is decomposed by oxygen and carbonic acid, and that it remains particularly efficacious in very pure azotic gas. It is farther decomposed by light. The analysis does not account for the action of this poison on the living body.

Brief Observations on a French Work lately published by Dr. MAHON, *respecting Legal Medicine, &c. communicated by* Dr. HALL, *of St. Pancras, Middlesex.*

THE subject of Legal Medicine involves the consideration of those cases, in which the evidence, testimony, or opinion of medical practitioners may be required in a court of judicature. As this branch of jurisprudence is intimately

intimately connected with some of the most important concerns of man in every civilized community, it must be allowed, that any attempt to afford instruction, and enlarge the boundaries of our knowledge on a subject of so much importance, cannot fail to prove generally interesting; particularly when it is considered, that many of the doctrines advanced by the earlier writers on forensic medicine, have beome, from the advanced state of science, altogether obsolete and unsatisfactory,

Some late writers, indeed, and, among others, Dr. Johnstone of Birmingham, availing themselves of the recent discoveries in chemistry, have given us much valuable information on particular branches in this department of medicine; but, as these publications embrace only a very small part of medical jurisprudence, a more extensive treatise on this subject was certainly a desideratum in English literature, and which the work under consideration seems, in a great measure, well calculated to supply; for although a small portion of the reasoning, contained in these volumes, may be inapplicable to the criminal law of this country, yet, on the whole, we may venture to affirm, that whilst Dr. Mahon has conducted his inquiries with much ingenuity and discernment, he has furnished a very considerable share of practical information, on a greater variety of subjects, connected with legal medicine, than is to be found in any other work hitherto presented to the public.

The volumes before us, commence with a general history of legal medicine; into any detail of which, we shall not here enter, since, from the present state of knowledge in this island, it could prove very little interesting to the English reader.

In this part of the work, we are presented with several humiliating examples of the absurd credulity which still prevails among professional men in some more remote parts of the Continent, as well as in France; and which our author observes, would have produced bloody scenes, when the tribunals were less enlightened.

The subject of *Impotence* is examined in a very comprehensive and satisfactory manner; but as charges on such a ground are now seldom or never brought forward in an English court of justice, we shall not enlarge on this or similar topics, in order to leave room for the consideration of others, which are of much more general importance.

In the chapter on *Hermaphrodites*, whose existence has been called in question by some naturalists, we find an interesting

interesting and accurate account of the dissection of a subject, which appeared to combine the genital parts of both sexes more perfectly than any other yet described; although, even in this case, the different sexual organs were by no means complete.

Dr. M. appears to us very judiciously to attach little importance to the opinions generally entertained on the subject of *Defloration*; whilst, on that of *Rape*, we are inclined to think, he carries his incredulity to an unreasonable length. Every medical practitioner must be aware, that much attention is frequently necessary, in order to discriminate between cases of spurious or false, and those of real pregnancy. Our author's observations on this *subject* are copious and correct, and cannot fail to assist in guarding the judgment against those fallacious appearances, which sometimes not only deceive the uninstructed patient, but even the intelligent physician. After enumerating the signs from which parturition may be inferred to have taken place, he justly remarks, that in order to form a certain conclusion on the subject, they ought to be considered collectively, and within a very short period after delivery. The author next enters, at some length, into the so much agitated question respecting the protraction of gestation beyond the usual period, and combats, with no inconsiderable share of success, many of the erroneous notions formerly prevalent on the Continent, respecting this subject.

On *Abortion*, and the marks of premature birth, we also find several useful observations, but none of sufficient importance to merit particular notice. Respecting *Monsters*, it is humanely observed, that they cannot be deprived of life without a crime; and that although the general welfare of society may render it necessary to preclude them from public employments, and even sometimes from entering into the married state, yet they are nevertheless entitled to share the means of subsistence, and the protection of the laws.

Mental Derangement may, perhaps, be justly regarded as one of the most important topics which Dr. M. has undertaken to discuss, in the present volume. We shall not here enter into any examination of the theory advanced by him, respecting the nature of this disease, since we consider it wholly unnecessary in a judicial point of view; neither shall we follow our author in his enumeration of the diagnostic signs and appearances, which, in his opinion, characterise the presence of insanity, as they do not

not appear to us very materially to differ from those given by former writers on this subject. We may, however, be permitted to remark, that, in this detail, he neither notices the protruded and glistening eye, the peculiar cast of countenance so observable in most maniacal patients, nor yet their extreme insensibility to cold, hunger, and fatigue.

Dr. M. very properly cautions his readers not to confound with mania, those states of delirium which proceed from fever, or other temporary causes; and, on the contrary, to be aware that real maniacs frequently give very pertinent answers to any questions proposed to them, and converse rationally on every subject, but on that which more immediately operated to produce the disease. Those alienations of mind, which proceed from the effect of poisonous substances, or intoxicating liquors taken into the stomach, are accurately discriminated.

In estimating the probability, whether a maniacal paroxysm actually prevailed during the commission of a crime, the author observes, that when individuals have acted in direct opposition to the common principles and feelings of mankind, both humanity and justice require us to regulate our decisions in conformity with that maxim of enlightened Jurisconsults, *semel furiosus semper presumitur furiosus, et contrarium tenenti incumbit onus probandi sanam mentem.*

Dr. M. now proceeds to the consideration of *Feigned* and *Concealed Diseases*; on which subjects, the practitioner will meet with many remarks worthy of attention. A number of facts, from different authors, are cited, and one in particular related, from his own knowledge, to evince how far frauds of this nature may sometimes be carried. As these impositions, however, may be various, no determined directions can be given, which will suit every case; much, it is therefore evident, must be left to the skill and sagacity of the physician.

In the second volume, Dr. M. enters largely into the consideration of wounds in general; but, as much of his reasoning on this subject is only applicable to the complicated principles of foreign criminal codes, we shall not follow him in this investigation. The comparative danger of wounds, in different parts of the body, are next examined with much minuteness of detail; and the combination of circumstances under which those that are not necessarily mortal, may accidentally prove fatal, are stated with much accuracy and precision. In the chapter on

Apparent

Apparent Death, we find some humane cautions against premature interment. On this subject, however, it seems here unnecessary to enlarge, as fortunately, the practice, which almost universally prevails in this country, of keeping the body unburied during several days, secures us against the possibility of any such abuse. We shall only remark, in general, that as the vital principle frequently remains in a latent state for some time, and as we are yet unacquainted with any certain criterion between positive and apparent death, besides that of putrefaction, some appearances of incipient decomposition should therefore be allowed to take place, in every case, before the period of interment.

Several pertinent remarks next follow on the danger of precipitate dissections. Such dreadful mistakes, we learn with astonishment, have oftener than once occurred within these few years in France.

A short chapter succeeds, on the subject of *Violent Death,* the principal signs of which, according to our author, are

1. Hæmorrhage.
2. Ecchymosis.
3. Inflammation.
4. Congestions of blood.
5. Every mark from which it may be presumed that the patient had suffered pain.
6. Spasms which continue even after death.

Having considered the evidence which may be drawn from each of these signs separately taken, he concludes by properly observing, that as several of these appearances may be occasioned by preceding disease, it is only from an accurate comparison of the whole, or the greatest number of them, that any certain conclusion can be formed on the subject. The next section of the present work, treats on the *Opening of Dead Bodies.* Here the practitioner, who may be called upon by the civil magistrate to perform this office, will meet with many remarks and observations highly worthy of attention.

The subject on which our author next enters, is of considerable importance, as it involves the consideration of the effects of poisonous substances on animal bodies. After giving a general enumeration of the symptoms produced by poisons on the living system, he proceeds to describe the signs which usually appear on the examination of the dead subject. He agrees with Hebenstreit, in regarding the

the separation of the villous coat of the stomach as affording the most certain criterion of the exhibition of poison. This appearance, however, we can by no means consider as decisive in every case of deleterious substances being taken into the stomach, since most of the vegetable poisons act rather by an impression on the nervous system than by exciting inflammation in the stomach and bowels.

In treating of poisons in general, the author observes, " If a person in perfect health, immediately after having taken any food, drink, or medicine, finds himself suddenly attacked by vertigo, pains in the stomach, colic, vomiting, cholera morbus, spasms, convulsions, faintings, stupor, and swellings of the lips, tongue, throat, stomach, or belly, with a painful sense of burning heat; and if, in addition to these symptoms, there be found in the matter evacuated or rejected by the patient, any chewed herbs, remains of roots, mushrooms, juices, powders, salts, or pills; if he complain of a disagreeable smell or taste in the matter vomited; or, lastly, if no epidemic disease prevail, accompanied with similar symptoms, we may reasonably suspect the agency of poison. He distinguishes the equivocal from the certain symptoms here detailed, and observes, that every sign of poison may sometimes be occasioned by the patient having eaten food difficult of digestion, or in a corrupted state; mushrooms, for example, though generally reputed harmless, have frequently produced this effect, as well as a variety of shell-fish, &c. and the author himself once witnessed every sign of poison supervene upon swallowing a roasted chesnut. He likewise discriminates between the effects of acrid and irritating poisons, which destroy by producing inflammation of the stomach and bowels, and those of narcotic substances, which impair and ultimately extinguish the energy of the brain and nervous system.

The consideration of individual poisons forms the subject of a separate chapter, and, as containing many valuable observations, well deserves to be consulted, particularly by the younger part of the profession, or by those who have not made this department of medicine their peculiar study. The intricate and much agitated question of *Child-Murder* is next examined by Dr. M. with great care and attention. He combats the opinion, maintained by some writers, that the death of the child necessarily follows from the neglect of tying the umbilical cord after delivery, and shows with what limitation this doctrine should be received.

He likewise enters largely into the consideration of the proof of infanticide, deduced from the specific gravity of the

the lungs, and infers, from a variety of experiments, that the pulmonary organs of a fœtus, which had never respired, will, nevertheless, swim and continue buoyant on the surface of water when putrefaction begins to take place; but, that if either the slightest pressure be employed, or when the putrefactive process has proceeded to a greater length, they will sink and remain at the bottom.

The experiments of M. Ploucquet, undertaken with the view of determining, by means of the balance, the quantity of blood introduced into the lungs by respiration, are also noticed. This gentleman weighed the body of a dead-born child, which had exhibited signs of life a few hours before delivery, and found that its total weight was 53,040 grains. The weight of the lungs, separately taken, amounted to 792 grains. Hence it appears, that the weight of the body, relatively to that of the lungs, was nearly as 67 to 1. The result of a second experiment, made on a full grown fœtus, under similar circumstances, was 70 to 1; whilst, on the contrary, in a third that had respired, although not even arrived at its full maturity, the weight of the body to that of the lungs was 70 to 2.

From these facts, M. Ploucquet infers, that the weight of the lungs is doubled by the introduction of blood into that organ, in consequence of respiration; and that, in doubtful cases, this great augmentation of weight will furnish a certain criterion by which we may distinguish between a fœtus which had respired, and one which had not. Great accuracy of observation, and repeated experiments would, however, be requisite, in order to establish the important mark of distinction here laid down by M. P. and after all, were the fact proved, that respiration had taken place, it does not thence necessarily follow that the child was afterwards intentionally destroyed. A chapter containing various directions and remarks respecting the examination of the dead body of an infant, supposed to have been destroyed by violent means, terminates the present volume.

The third and last volume of the present work commences with a chapter on the subject of *Death by Submersion.* Of this article, Dr. De la Fosse is said to be the author. The chief object of inquiry, according to this writer, should be to ascertain, whether the individual had perished in the water, or been thrown into it after death. Here he enters into the consideration of the various proofs and arguments which may be adduced on each side of this question, in order to secure the medical jurist against

any erroneous judgment in his conclusions. But, besides the small portion of information conveyed in this paper, we were rather surprised to find, that he had adopted the exploded notion of the reception of water into the bronchia; as likewise, in the subsequent chapter, which treats of *Death by Suspension*, to hear it asserted, by the same author, that in this case life is destroyed by the accession of apoplexy. It is indeed truly astonishing, at the present day, that Dr. De la Fosse appears to be wholly unacquainted with the discovery of Dr. Goodwin, as well as with the labours of succeeding writers in the same tract of inquiry. In this volume we are likewise presented with several specimens of *Medical and Surgical Reports*, which, with Dr. Mahon's observations on this subject, are well deserving the attention of young practitioners. Next succeed some cursory Observations on several questions connected with Legal Medicine, which are followed by a sketch of *Medical Police*. In this division of the work, the regulations necessary to be pursued in lazarettos, hospitals, &c. are considered, and the abuses frequently attendant on such institutions pointed out.

The chapter on Celibacy contains many remarks highly interesting not only to the medical practitioner but to the politician; whilst there are others, in which we can by no means acquiesce, and which could only be tolerated under the most despotic governments.

After considering the state of *Pregnancy*, and that of *Lying-in Women*, in relation to society, on which subjects we find much useful information intermixed with several unimportant remarks, Dr. M. proceeds to treat of the *Cæsarean Operation.*

No question has been more fiercely agitated, in the present day, than the expediency of performing this dreadful operation.

That cases, however, have occurred, in which the narrowness or distortion of the pelvis was so considerable, that the child could not be brought through the natural passages by any art whatever, as well as that the life of both mother and child have been preserved in a few cases by the Cæsarean section, even the most sceptical must, we think, admit upon an impartial examination of the great mass of evidence lately presented by Dr. Hull to the public on this subject. But as the number of cases, in which Hysterotomy has been attended with complete success, is so very inconsiderable, few British practitioners will, we conceive, consider themselves justified in having recourse

to

to it, without previously attempting every other means of effecting the delivery. Fortunately, the improvements that have been made in the mode of delivery by the crochet, which is now known to be practicable in cases wherein the section of the uterus had formerly been resorted to, warrant us to suppose, that the operation of Embryulcia will in future make the necessity of performing the Cæsarean section an extremely rare occurrence.

Dr. M. however, does not at all enter into the examination of the question, whether the Cæsarean section be preferable to a division of the symphisis pubis, or any other mode of operation in cases of extreme distortion in the pelvis; but merely considers it with a view to the preservation of the child, after the death of the mother. The following are the signs on which, according to him, the performance of this operation should depend.

That the supposed death of the mother shall have been preceded by a severe disease, or by symptoms that usually prove fatal.

That every effort shall have been made to restore the action of the respiratory organs.

That the action of the heart and arterial system shall be no longer perceptible.

That all motion shall have ceased, excepting that of the child in utero.

That the natural heat shall have become extinct, either altogether, or at least in proportion to the continuance of the symptoms which had destroyed the patient; and in the latter case, the heat of the body usually ceases before the last gasp.

Lastly, That all the usual remedies against the different kinds of asphyxia shall have been employed.

Our attention is next called to the subject of *Afflictive Punishments*. Dr. M. like most late writers, reprobates every kind of severity, which is not essentially necessary to public security, and the reformation of the criminal.

The work terminates with a chapter on *Inoculation for the Small-pox*, from which we learn, that our author was a decided advocate in favour of this practice.

Happily, however, the important discovery of Dr. Jenner supersedes the necessity of any discussion respecting that subject, and leads us to indulge the pleasing hope, that, by the application of the vaccine virus to the purpose of inoculation, we may be enabled eventually to extinguish the infection of the small-pox; a disease which has, in every age, proved so destructive to mankind.

From

From the brief Analysis here given, every reader, will, we trust, be enabled to estimate the importance of the present publication, which, as embracing a great variety of topics, and containing much information relative to legal medicine, cannot fail in our opinion, to prove useful not only to the medical practitioner, but also to civilians, and others who require instruction in this department of science.

To the work is prefixed a short biographical sketch of the author.

Observations on the Sebacic Acid, by Cit. THENARS; *communicated by our Correspondent at Paris.*

THAT volatile matter, of a penetrating and even suffocating smell, which is disengaged in the distillation of fat or grease, the chemists had regarded as a particular acid, to which they gave the name of *Sebacic Acid*; Cit. Thenars however, endeavours to prove, that the true sebacic acid has been unknown till now, and is possesed of quite different characters to what is generally adopted. He proposes two methods of obtaining the true sebacic acid; the first of which, as the most simple, consists in distilling the fat by one fire, and in washing the product of the distillation with boiling water; which being afterwards filtrated and evaporated, an acid, crystallised in form of needles, will be obtained. The second method is more complicated, though we are much surer to get by it that acid in a greater degree of purity. The water with which the product of the distillation of fat has been washed, is saturated with potash; the sebat of pot-ash that is thus produced is afterwards decomposed with a solution of lead, by which a flaky precipitate of sebat of lead is produced, which being decomposed with sulphuric acid, yields, by adulcoration and evaporation, a pure sebacic acid. This acid has a slightly sourish taste, is not coloured, and melts in the manner of grease. It is much more soluble in hot than in cold water: boiling water, perfectly saturated with sebacic acid, coagulates on becoming cool. Alcohol dissolves likewise a considerable quantity of it. When it is carefully evaporated from these solutions, it may be obtained in form of very large and brilliant laminas. Sebacic acid precipitates the

the acetit and nitrat of lead, the nitrat of silver, the acetit and nitrat of mercury. It forms, with pot-ash, a soluble salt of inconsiderable taste, which does not attract moisture from the atmosphere. It does not render turbid either lime water or the water of barytes and of strontianites. The preceding experiments evidently show the presence of a particular acid, produced by the distillation of fat; but the nature of this product remains to be exactly examined, and, in which circumstance, the error of chemists, with respect to the true nature of this acid, originates. On treating the product obtained by the distillation of fat with water, and on saturating this water with pot-ash, a saline mass will be obtained by evaporation; when this is dry, put it into a retort, and pour to it some diluted sulphuric acid. On distilling this mixture, an acid will be disengaged, which has all the known characters of acetous acid; the proportion of this and the sebacic acid in the products of the distillation of fat, differ according to the degree of heat that has been employed. Cit. Thenars thinks, that the pungent smell of the distilled fat may be owing to a part of this matter being decomposed, and reduced to the form of a gas, which is not acid, as it neither reddens the blue vegetable colours, nor combines itself with pot-ash. Mr. Crell, and the chemists of Dijon, have considered the sebacic acid as volatile and of a pungent smell, which error seems to have arisen from the acetous acid, which is disengaged by treating the above combination with pot-ash by sulphuric acid, and perhaps also from the muriatic acid, with which the common pot-ash is frequently impregnated, and which is also disengaged by the sulphuric acid.

Observations on the Juice of the Papaya; *by* Cit. VAUQUELIN.

IT is related by Cit. Charpentier de Cossigny, that the juice of the Papaya, *(Caraca Papaya, L.)* is successfully employed in the isle of Bourbon against the tape-worm, on which account Cit. VAUQUELIN reduced it to a chemical analysis. From this it appears, that the juice, dried without any previous preparation, puffs up on burning coals, emitting an odour like that of burning flesh; it yields a great

great quantity of ashes, which afford before the tube a phosphorescent light, and consist of pure phosphat of lime. The dry juice of the Papaya easily dissolves in water, to which it imparts a milky colour, owing to a substance which is not soluble. If suffered to stand, the water becomes clear; but soon after it turns putrid, diffusing a very offensive smell. The insoluble substance being collected, had all the characteristics of an animal fat. Nitric acid makes a precipitation in the solution of the juice of the Papaya, and the precipitated matter takes the consistency of a jelly. If the solution be previously boiled, white flakes fall to the bottom, and it is not capable of any farther precipitation by nitric acid, but only by an infusion of galls. Alcohol occasions likewise a precipitation in the solution of the juice of the Papaya. It is, however, soluble in alkalis; and when decomposed by acids, it emits a nauseous smell. From these and other characters, it appears to bear a very great similitude to the serum of the blood, and perhaps to the blood itself, particularly as Cit. Vauquelin thinks he has observed traces of a fibrous part in the insoluble part of the juice. Cit. de Cossigny has brought with him an extract of the Papaya, which is half transparent, of a reddish colour, and prepared by evaporating a solution of the juice of that tree in rum. This extract, on being submitted to the same experiments as the dry juice, caused some difference to appear. Its taste was similar to that of raw meat, and it was not coagulated by heat; acids had no effect upon it. Vauquelin compares it with animal gelatine; and he thinks that it has acquired these properties by its solution in rum, and by its having been evaporated to the consistency of an extract.

Cit. Vauquelin terminates his notice with observing, that there is a singular analogy between this juice and a certain animal liquor; and he mentions, that Fourcroy has already discovered traces of albuminous matter in the juices of some plants; and that Scheele mentions his having found in the leaves of vegetables, a sort of caseous substance; moreover, Cit. Proust asserts, that the milk of sweet almonds is a combination of oily and caseous particles.

On

On the Preparation of the mild Sublimate Mercury, by Mr. Buchholz; *communicated by* Dr. Noehden.

It is known that the common prescription for preparing the sweet mercury is to combine three parts of pure quicksilver with four parts of corrosive muriated quicksilver; but the Pharmacopœa Borussica differs from this prescription, by ordering five parts of corrosive sublimate mercury to be mixed with four parts of metallic quicksilver. As there remains however a part of the quicksilver, on following the common prescription, which prevents us from obtaining the mild sublimate in proper purity, Mr. Buchholz supposes this to take place in a greater degree by proceeding according to the prescription of the Pharmacopœa Borussica. In order to be more convinced of this circumstance, he accurately mixed 4lb. of corrosive sublimate with 3 lb. 3 oz. 4 sc. of metallic quicksilver, and sublimed the whole mass by a strong fire. After the sublimation, he found the greatest part of the sublimate to be impregnated with metalline quicksilver of a greyish colour. The same result ensued after a second sublimation by a still stronger fire, as the upper part of the phial was entirely covered with metalline quicksilver, the quantity of which amounted to two ounces, two drachms. When the sublimation was made in a retort, the same result appeared. All this induces Mr. B. to think the old proportion in combining the corrosive sublimate mercury with metalline quicksilver preferable to that which is recommended in the Pharmacopœa Borussica. Mr. B. farther observed, that, if the sublimation is accidentally prevented from being finished, he notwithstanding found that part, which remained unsublimed, equally changed into sweet sublimate, as that which had been really sublimed; whence he concludes, that in preparing the mild muriated mercury by a double sublimation, it might not be necessary to finish entirely the first sublimation. It is known, that Mr. Scheele recommended the preparation of sweet mercury by precipitation, as an easy and expeditious method; but though this precipitate appeared, from several tests, not to differ from that prepared by sublimation, yet Mr. Buchholz thought it not improper to make several experiments, in order to ascertain whether both preparations are really different in their component particles and medical effects.

From the results of these experiments, it appears that the preparation of Scheele contains no traces of corrosive mercury; that it agrees in the essential properties with the sweet mercury, which is prepared in the common way; by the same difficulty of dissolving; by its being not precipitated with lime water as red oxyd of mercury; and it seems merely to differ by evolving a very inconsiderable portion of muriatic acid when it is sublimed. But in its medicinal properties, it is perfectly equal to the former. The preparation is less expensive and troublesome, and has different other advantages, particularly if we proceed according to the following improved method of Scheele.

Take of quicksilver and of pure dilute nitrous acid equal parts; put the mixture first in a cool place; afterwards, when the solution of the quicksilver does no longer go on, put it in a warm place; and at last, for saturating the solution entirely with quicksilver, into the sand bath, gradually increasing the heat till the solution begins to boil. In this manner we prevent any excessive combination of oxygen with the quicksilver, though we obtain a saturated solution, particularly by adding so much quicksilver that there remains a part undissolved. The solution being perfectly saturated, must be poured boiling hot into a hot solution containing as much common salt as there was employed of quicksilver for the solution. Having finished the decomposition of the nitrat of mercury by continually stirring that mixture for some minutes, and separated the saline particles by repeated edulcorations with pure water, take to every pound of quicksilver employed in the process, *one* ounce of pure sal ammoniac dissolved in *two* pints of water, which solution must be mixed with the precipitate obtained in the above way, and placed for three or four hours in the sand bath, till it boils gently. When the precipitate has subsided, pour off the solution and add it to the liquors still containing quicksilver, which have been separated from the above precipitate, after the quicksilver had been first precipitated by the common salt. This mixture being carefully decomposed by a solution of carbonat of kali, yields all the remaining quicksilver in form of a beautiful white precipitate. Wash both precipitates by frequent additions of water and subsequent decantations, until no saline taste is perceptible; dry and keep them in a shady place.

On

On the comparative Effects of Light and Heat, by Cit. BERTHOLLET; *communicated by our Correspondent at Paris.*

COUNT Rumford has observed, that the solution of gold mixed with different white bodies, becomes purple on being exposed to the solar light, or to the heat of a candle, although it undergoes no such change in the dark; he has remarked analogous changes in the solution of silver. These changes, as well as the transition of white to black, which the muriat of silver undergoes when placed under water, and exposed to light, had been ascribed to the disengagement of oxygen from the oxyd of gold or of silver, and to the two metals approaching to a metallic state. Cit. Berthollet, however, never perceived that oxygen was disengaged in this case; the water became acid, but contained nothing but simple muriatic acid, and not oxygenated muriatic acid. From this and similar observations, he concludes that the change of colour in the muriats of gold and of silver, is owing to the disengagement of a part of muriatic acid, which seems to be assisted by the presence of water. Cit. Berthollet thinks, that the acid combined with the oxyd of silver, by its affinity with that oxyd, prevents the gold and silver from recovering their metallic state, in the same manner as terreous and vitrifiable substances prevent the reduction of metallic oxyds. In a strong heat, however, these auxiliar affinities, as Berthollet expresses himself, are not sufficiently powerful, and hence we may understand, why colours on porcelain, which originate from the oxyd of gold, are more fugitive than those of other oxyds, and cannot endure the operations that require a great fire. He mentions, afterwards, the experiments of Count Rumford, according to which he has reduced the oxyds in the solutions of gold and silver, brought in contact with coal, and exposed to the action of solar light, or to the heat of boiling water. These observations seem to confirm the identity of the substance of light with that of heat, or at least the identity of their effects. Cit. Berthollet however adds, that we may discover in the circumstances attending the action of light, the reason of the different effects, as the latter disengages the oxygen of the oxygenated muriatic acid, and of the nitric acid, while heat only suffers them to pass over in the distillation, without decomposing them.

CRITICAL ANALYSIS

OF THE

RECENT PUBLICATIONS

ON THE

DIFFERENT BRANCHES OF PHYSIC, SURGERY, AND MEDICAL PHILOSOPHY.

The Principles of Surgery; in two volumes. Volume First, of the ordinary Duties of the Surgeon, &c. Volume Second, a System of Surgical Operations, &c. By JOHN BELL, Surgeon. Edinburgh, 1801, pp. 674, 4to.

THOUGH only the first volume of this work has come to our hands, we shall no longer delay to direct the notice of our readers to a publication which offers such a singular variety of interesting matter, so much entertainment, so much excellent sense, and such ample food for criticism.

Our limits and plan, however, only allow of *analysis*; and amidst such a profusion of desultory matter, and (we may add) a *display* of professional learning, the task of analysis is in no small degree perplexing.

The object of the work before us is the excellent and laudable one of forming the accomplished Surgeon; of exhibiting to the student all the variety of knowledge requisite to render him a thorough master of every branch of his profession; equal to all emergencies; great in little things as well as in objects of magnitude; able to rely upon his own resources and ingenuity; and ready to act at all times in the exercise of a profession which demands, in a peculiar manner, the rare alliance of prompt decision with prudent caution.

The volume opens with a short preliminary Discourse on the education and duties of a Surgeon; and it would be injustice to our author not to add, that he has seized upon the precise points to which the attention of the young surgeon should be directed, and with excellent good sense he notices some of the prevailing errors in surgical education. One of the most important of these errors is an overweening love for the shewy and splendid branches of surgery: "Such," the author observes, "is the natural horror of blood, and the hesitations and difficulties of the surgeon himself, when any thing so daring as a dangerous operation is to be done, and such are the unceasing and anxious inquiries of friends, that operations, though the least part of our profession, strike a deeper interest into the public mind than the daily cures we perform. Operations usurp an importance in Surgical Education, which they should not naturally

naturally have. Operations have come at last to represent the whole science; and a surgeon, far from being valued according to his sense, abilities, and general knowledge, is esteemed excellent only in proportion as he operates with skill."

Indolence is another great bane to professional excellence, which the author describes (we are afraid too justly) as a fault peculiarly applicable to modern education; to those who learn the most arduous of all sciences "by hearsay and report, by walking the wards of hospitals, lounging through the classes of a college, and by hearing and repeating the news of the passing day." The qualities of a surgeon required by Celsus, *manu strenua stabili, nec unquam intremiscente, animo intrepidus immisericors* (a hand, firm, steady, and untrembling; a mind, bold and merciless) are ill engrafted upon the mild humane feelings of the well educated gentleman; and it is not without reason that the author contrasts the often assumed character of boldness in operations, with the calm steadiness arising from accurate knowledge and practised skill.

In the second Discourse, the author enters upon his subject by a view of the doctrine of adhesion, particularly as it applies to the treatment of recent wounds. As it is his object to compare and connect the antient with the modern practice, he describes the method of treatment pursued by the older surgeons, and their dreadfully bad custom of plugging up every fresh wound with tents, and of taking a variety of other means to convert every recent wound into a suppurating sore. The illustrious Taliacotius appears to have the merit of introducing some of the first improvements in this important branch of surgery; but through the extravagance of some of his followers, and the irresistible operation of the wit and humour of his satirists, his name has become irrevocably connected with ideas of ridicule.

The practice of procuring adhesion or union by the first intention, our author very justly observes, "has done more for Surgery in a few years than any other general observation, not excepting even the greatest of all discoveries, the circulation of the blood." Though this valuable practice has made its way by imperceptible gradations, and through the efforts of a number of eminent men, it is indebted more particularly, as the author remarks, to Mr. Hunter and the London school.

The chapter on sutures is clear, precise, and more entirely practical than often occurs. "Surgeons," he observes, "have practised all imaginable methods of uniting wounds, and very proud have they been of their sutures, and still prouder of the names they have given them." The rules which are laid down for the reunion of deep muscular wounds, and the earnestness with which the importance of procuring speedy adhesion is inculcated, highly merit the attention of the student.

The third Discourse treats of the nature of ill-conditioned and complicated wounds, of ulcers, dressings, bandages, and the daily duties of an hospital surgeon. The reader must be aware what an important,

important, extensive branch of surgery is included in this chapter, and how large a portion it includes of the daily duties of the busy, harassing, and actively useful life of the camp or navy surgeon. We have no hesitation in recommending the whole of this chapter to our readers, as replete with admirable sense and sound doctrine; and, without involving the subject in tedious and unmeaning classification, the author, in following the full and descriptive mode of instruction which particularly suits the class-room, has thrown together a series of observations which every student will read to advantage.

A highly proper and we fear very generally necessary precaution is given concerning the subject of poultices. As this application usually falls to the province of the nurse rather than the practitioner, it is much to be feared that it is too often resorted to as an excuse of indolence or incapacity. "I must truly confess," says our author, "that while we are improved in all the great and difficult parts of surgery, we are gone backwards in all the nice and delicate attentions which are so necessary in the cure of wounds. Long ago, a surgeon could never do too much in the way of probing and searching wounds, tenting them to the quick, injecting them with balsams, and torturing the limbs with injudicious bandages; but now, a surgeon thinks he has done enough in clapping a plaster over a sore with the palm of his hand, or with clean hands he feels the pulse for form's sake, and orders the limb, without regard to its condition, to be laid in a mash of poultice." Instead of laying a relaxed and extensively suppurating limb in a mash of poultice, where the patient for half an hour's warmth and comfort suffers permanent cold, filth, and moisture, how much better and more consonant to the soundest practice is the following method, which we cannot forbear giving in the author's words. "We remove the poultice, and lay a piece of dry lint on the wound; we use a stimulant fomentation made of a strong decoction of camomile flowers, with sal ammoniac and spirits, to cleanse and excite the skin; we dry the limb thoroughly, wrap it up in warm flannel, and remove the foul and moist clothes; we dress the wound the next day with slips of plaster, that the dressings may come easily off, and with soft and fine lint fill up the basis of the sore, laying a flat sponge above the lint to absorb the matter of the wound. Let the lips of the wound be supported with soft pledgets of lint, and the whole limb be rolled carefully from the toes upwards, &c."

Activity and vigour are the characteristics of the practice which our author lays down, such as a frequent use of the lancet in giving a speedy outlet to all abscesses within the muscular or deep-seated parts, a constant recourse to all the auxiliaries of pressure, stimulants, and astringents, and all the mechanical means that the contrivance of the surgeon can suggest.

Under the treatment of complicated wounds, the author considers the subjects of ulcers, hospital gangrene, and gun-shot wounds; and he cites the history of several valuable cases of our own brave, thoughtless, and intemperate seamen, wounded in various actions

of

of the late war, who have afforded striking examples of every degree of these dreadful calamities. These are subjects which peculiarly interest the hospital or military surgeon, but an acquaintance with them is highly requisite to all practitioners.

In the next Discourse, the author notices the important practical topics of bandages, and gives an elegant selection (illustrated with plates, as in all the other parts of the work) by the judicious use of which every part of the body may undergo the benefits of this application. It is sufficient to observe, that this selection is judicious; and the importance of bandages, in a practical view, draws from the author another censure of the carelessness to every-day objects, and the neglect of little attentions which so often characterises modern surgical education.

In the fifth Discourse, the author gives an historical view of the various means employed from the earliest periods of surgery to modern times, of preventing the most alarming of all accidents, *haemorrhagy.* He observes, with great force, that "it is the dashing of the blood from the great arteries, and the fainting of the patient, that hurries our most important operations, and makes all the difference between operating on the living body, and dissecting the dead. It is this which unsteadies, at times, the hands of the boldest surgeon, and makes his heart at the first alarm sink within him. No surgeon or spectator can keep the natural colour of his cheek when a patient is expiring by loss of blood; and the actual death of a patient must leave a lasting melancholy on the surgeon's mind."

The History of Science hardly affords any more satisfactory example of gradual and high improvement than in the treatment of hæmorrhagy. From the dreadfully absurd and superstitious incantations, and monstrous rites, of the antients; from the cruel (though often powerful) use of the actual cautery, and the boiling oils and turpentines; from the supremely ludicrous follies of the sympathetic powders and washes, introduced by Kenelm Digby, and other alchemical quacks of the same stamp; how great is the progress of improvement to the needle and ligature of Paré; to the judicious use of mechanical styptics and continued pressure! We shall not attempt to analyse rigorously the contents of this historical view of the subject, though curious and entertaining, but shall only touch upon a few of the author's observations on the modes of suppressing hæmorrhagy actually in use. The illustrious Petit was the last advocate of eminence for the practice of compression, used in its most extensive application; and having employed much perverted ingenuity in explaining the circumstances of suppression of hæmorrhagy, from a wounded artery, by the supposed shape of the clot or coagulum formed above the separation of the vessel, he applied his theory to practice, and introduced the dangerous method of attempting to stop hæmorrhages of large arteries by compression alone. This fallacious theory of the shape of the coagulum has long been exploded. The contraction of the artery through its whole

extent,

extent, from the divided extremity up to its nearest inosculating branch, is another opinion supported by White, Kirkland, and Aitken. The explanation of the natural causes by which hæmorrhagy is stopped, is however explained by our author, on the principle of the surrounding cellular substance being injected with blood flowing from the divided artery, which extravasation is, in many cases, a sufficient barrier to restrain the bleeding till the parts inflame, and the artery is entirely stopped. Pressure, therefore, according to our author, only restrains the open flow of blood, but does not prevent it from insinuating itself into the adjacent cellular substances; and hence, he argues, when any sudden displacing of parts, any exercise or motion is made in the newly-closed wound, the cellular compress is removed, and the artery bleeds afresh. The whole of the author's explanation is illustrated by the not unfrequent, and often very perplexing accident of a wound in the radial artery; and in whatever manner the explanation of facts may strike the reader, the description of this kind of accident, with the various modes adopted in order to stop hæmorrhage, will be perused with great satisfaction and advantage.

An inquiry of high importance, arising immediately from the preceding observations, is next considered. It is, *the condition of the artery in Aneurism, and the effects of ligatures upon the artery.*

After relating the histories of several cases from various surgical writers of aneurism of the brachial artery arising from accidents in venæsection, he considers the question, whether the compression usually employed in these instances effects a cure by uniting the sides of the wound in the artery leaving it pervious, or by obliterating the vessel altogether, and leaving the circulation to be continued through the inosculating branches. Most Anatomists will, (we believe) agree with the Author in adopting the latter opinion. The effect of two ligatures passed round an artery, so as to intercept a portion of the vessel between them, is another point of importance: they operate "by making the several points of the arterial canal pass through the several stages of inflammation, from adhesion in one point to gangrene in another." The space included between the ligatures falls into gangrene; the space immediately under the stricture of each ligature adheres; this adhesion prevents the gangrene or inflammation from passing along the higher parts of the arterial canal; but the inflammation affects the arterial tube a little way upwards and downwards, so as to thicken its walls and contract its cavity, whence the canal of the artery is obliterated a little way beyond the exact place where it is tied." This explanation is illustrated by a very perspicuous drawing.

The cause of the secondary hæmorrhagy, which has so frequently defeated the object of the modern operation for aneurism, being, as our Author observes, in almost every case, *ulceration of the artery*, a number of practical observations are deduced, relating to the method of applying the ligature, the time of withdrawing it, and the degree to which the artery is to be exposed during the operation.

[*To be continued.*]

Essays on the Diseases of Children, with Cases and Dissections; by JOHN CHEYNE, M. D.—*Essay* 1. *On Cynanche Trachealis, or Croup.* Edinburgh.

THE diseases of children form a very interesting, and in some instances almost a peculiar branch of medical practice. The character of the infantile constitution, which operates more or less whatever other habit of body may be present, and gives a tendency to peculiar diseases; the age of the subject, which prevents the practitioner from receiving much advantage from his patient's own description of symptoms; and the domestic economy of the nursery, which most powerfully promotes, in some instances, and counteracts in others, the plan of the Physician;—all these circumstances contribute to give a peculiar character to the investigation of the diseases of children. The Author expresses it to be his design "to discuss, in separate Essays, the most important of the diseases of children, beginning with those, as less intricate, to which children, after being weaned, are exposed, and proceeding afterwards to those which attack infants at the breast."

This order is the contrary of that which we should naturally expect; but in detached Essays, each unconnected (if we may judge by the specimen before us) with the succeeding, the Author may be allowed to consult his own convenience.

He could not have selected a more interesting subject than the present; for the Cynanche Trachealis, or Croup, is a disorder of the highest importance to the practitioner to be so familiar with as to be able to detect very early in its progress, on account of its extremely dangerous nature, and the necessity of immediately having recourse to the most vigorous measures for its removal.

After a very concise history of the disease, the author gives an accurate description of the symptoms and the pathology. No new conjectures are added concerning several of the difficult points in the pathology of Croup; one circumstance, however, is explained in the following manner: "There is a circumstance mentioned in the history of the disease, which I have not seen satisfactorily resolved: I allude to the sudden extinction of our hopes when they are at the highest, consisting, first, in a wonderful remission of the disorder, and soon after in a fatal exacerbation. Perhaps this ought to be attributed rather to a mechanical than to a spasmodic affection of the parts. It sometimes takes place after the expectoration of part of the membrane; and I suppose that the connection of the remainder with the trachea may be loosened; so that, in taking a full inspiration, this detached portion acts as a valve, compleatly shutting up the tube, and thus suddenly suffocating the child."

Nothing peculiar occurs in the mode of treatment. The author with justice places his chief confidence in blood-letting, either from the arm, or in preference, from the jugular veins, or else by leeches.

The following facts concerning the causes of the disease merit attention: "I have observed that some families are much more liable to this complaint than others; very often, when one child in a family takes the disorder, the other children are sooner or later affected in a similar way. In the second place I have observed, that in Leith the danger is greater or less in exact proportion to the nearness or distance from the sea-shore; and I conclude, that the observation would hold good elsewhere. Of all the instances I have seen of the disease this year, amounting to ten or eleven, not one of the children lived a stone's throw from the sea-shore or harbour. In Edinburgh, which is only a mile and a half distant from the sea; nay, in the skirts of Leith, the farthest from the beach, although not a quarter of a mile removed, the disease is rare."

The greater part of the volume is occupied with the history of several very illustrative cases, to which are subjoined five beautiful and accurate coloured plates, that show, in a very perspicuous manner, the nature and appearance of the parts concerned in, and changed by, this dreadful disease, a reference to which cannot fail of immediately making the reader familiar with this important example of Morbid Anatomy.

The Author endeavours to distinguish Croup from the acute Asthma, described by Miller, by the following diagnostics: "In Croup the cough is constantly ringing in our ears; in the acute Asthma there is no cough. In Croup there is very seldom any remission; the remission in acute Asthma is one of the most striking phenomena of the disease, and it is attended with some evacuation, as belching, vomiting, or purging. In Croup, the pulse is strong, the urine high coloured, the fever is much greater, the voice sharp and small; in acute Asthma, the pulse, though perhaps equally quick, is less full, the urine is limpid, and the voice is croaking and deep."

The distinction between these two diseases is the more important as the practice to be pursued is different, at least so far that the antiphlogistic method, and bleeding in particular, is indispensable in Croup, but of very doubtful efficacy in the Asthma.

An Apology for differing in Opinion from the Authors of the Monthly and Critical Reviews; on the Subject of Variolous and Vaccine Inoculation; on Dr. Jenner's Discovery; on the Means of preventing Febrile Contagion; and on the Establishment of Charitable Institutions; by J. C. Lettsom, M. D. & LL. D. octavo, pp. 60. London, 1803.

The practical opinions and facts contained in this pamphlet are so consonant to those we have always inculcated, that we have no hesitation in expressing our approbation of it.

MEDICAL

MEDICAL AND PHYSICAL INTELLIGENCE.

[FOREIGN AND DOMESTIC.]

PROGRAM *of the Prizes proposed by the* SOCIETY *of Montpellier, sitting in the School of Medicine.*

Subject of the first prize.—"To determine in what sorts and what circumstances of chronical maladies, inflammation may be useful or dangerous, and with what precautions we ought to excite or to moderate it, in the treatment of them?"

Attempts have been made to determine the utility and the danger of fever in chronical diseases. Inflammation exhibits a symptom, which has no small influence on certain maladies of this class. The Medical Society expects, that agreeably to a sufficient number of observations and decisive experiments, there should be established on this subject, clear, simple, comprehensive, and invariable principles, the application of which, it may be easy to reduce to practice. The relations of inflammation with chronical maladies ought to be considered under very different points of view. Sometimes, as an essential symptom of those maladies, it constitutes one of their principal elements, as appears in heavy and chronical inflammations of the viscera; then it is susceptible of error from excess or defect; and it often becomes necessary to lessen the inflammatory mode, or to reincite it *(relever.)* Sometimes, as a foreign symptom, it is accidentally developed during the course of the disease, as is observed in the affections of the lymphatic system, glandulous stoppages in the throat, cold, indolent, schirrous tumours, &c.; then it may become advantageous or hurtful, according to the time and the circumstances of its appearance.

It is therefore of importance to have fixed rules to excite or to moderate it in the treatment of it; and lastly, inflammation is sometimes the product of an acrid, heterogeneous, and virulent principle, fixed on a sensible part; and in this case, it is requisite to estimate its advantages or its inconveniences, its utility or its dangers, according to the knowledge that we have of the nature of that principle, on the contexture of the parts affected, on their importance and their sympathy with others, &c. This takes place in dartrous, venereal, scrophulous affections, where the inflammation assumes characters proper and relative to each. What are the real effects of inflammation in relation to those different orders of maladies? How can we distinguish whether it is useful or dangerous? What may be the favourable or prejudicial conditions in order to develope it? According to what views, with what pre-

 cautions,

cautions, by what means, is it expedient to excite or to moderate it in these sorts of cases? The action of the atmospherical air, the impression of different gases, the injection of divers liquids, the application of the heat of the vescatory, caustics, cautery, *moxa*, the effect of compressive means, &c. All these things may be referred to the object of the question which the Society proposes; and ought, according to their respective degree of interest, to fix the attention of the candidates.

The prize will be to the value of 500 francs; it will be adjudged in the sitting of the 30th Floreal, year 11 of the Republic.

Subject of the second prize.— "To establish, agreeably to observation and experience, what is the degree of confidence that we ought to place in the method of administering, by frictions, different substances that are usually prescribed to be taken inwardly? In what relations are the effects produced by the same remedy taken inwardly, or applied in frictions? And what are the proportions that should be observed in the doses, to indicate the circumstances and the maladies which ought to give a preference to this method? And, lastly, in the different affections, what parts of the body should be fixed upon to apply this remedy with the most efficacy?"

The solution of this last question requiring, as it should seem, a series of observations and of experiments, which it would be difficult to collect or to make in the too short space of one year, the Society has conceived that it would be serving the candidates and science itself, by coming to a resolution that it would not adjudge the prize until its sitting of the 30th Floreal of the year 12. The value of it will be equal to that of the prize of the year 11. The resident Members of the Society are excluded from the competition for the two prizes.

The Memoirs, to be written in Latin or French, are to bear an epigraph or motto, which the author will take care to annex to the sealed billet which shall contain his name; they should come to hand before the 1st Floreal of the years in which the prizes will be adjudged, and should be directed, free of postage, to Cit. Lordat, the elder, perpetual Secretary of the Medical Society (Rue Blanquerie) of Bourdeaux.

The Society acknowledges, with gratitude, that it is indebted to the generosity of one of its Members, who wishes to remain unknown, for a sum of 200 francs, offered as a supplement to the prize of the year 11. As the question for the year 12 requires much investigation, the Society has thought that it will not be imposing upon the beneficence of the donor, to divide the said sum, so as to enlarge the two prizes equally.

A new analysis of the Boracites has been lately made by Cit. Vauquelin, the results of which are different from those of former chemists.

chemists. This interesting mineral, which no where occurs but in the neighbourhood of Linebourg in the Electorate of Hanover, was first analysed by the celebrated German chemist, Mr. WESTRUMB of Hameln, who discovered in it:

Boracic acid - - -	68
Magnesia - - - -	13,05
Lime - - - - - -	11
Aluminous earth - -	1
Oxyd of iron - - -	0,75
Siliceous earth - -	2
	95,80

In consequence of this analysis, it received the name of Borate Magneo-calcaire, by all the French chemists. Cit. VAUQUELIN, however, examining this substance some time ago with Mr. SMITH, who had procured a considerable quantity of it, thought he had found, that lime was not an essential part in the composition of this mineral, as the powder of it made an effervescence with acids, which seemed to be exactly proportionable to the small quantity of lime that was present in this substance. In order to ascertain this circumstance, the two chemists endeavoured to separate the portion of carbonat from the borat by weak acids, diluted with much water, especially by the acetous acid; in which attempt, however, they could not properly succeed, as even the weakest acetous acid did likewise affect the Borat, on which account the question was left undecided for want of transparent crystals, which make no effervescence with acids. But some time after, Cit. VAUQUELIN being supplied with a sufficient quantity of perfectly transparent Boracits, through the medium of Dr. STROMEYER, of Gottingen, made new experiments with them, with the intention only of ascertaining the presence of lime. Having reduced them to powder, he added muriatic acid; in which, by means of a gentle heat, it was dissolved, and the whole mass afterwards evaporated to dryness, which removed the superabundant acid, and it was again dissolved in a small quantity of cold distilled water. By this method the greatest part of boracic acid was separated in form of white, brilliant laminae. Having diluted the above solution with more water, he mixed with it a certain quantity of oxalat of ammonia, which is known to be the best re-agent for discovering the presence of the smallest portion of lime that may be contained in any liquor, providing there is not a superabundance of acid in it. Notwithstanding this experiment, not the least traces of lime could be perceived in the said solution. For the purpose of being assured, whether the small quantity of boracic acid that was dissolved in the water, together with the muriat of magnesia, had not hindered the lime from being precipitated, he mixed a portion of muriat of lime, not exceeding $\frac{1}{50}$ of the Borat employed for the experiment, and instantly a cloud appeared throughout the liquor. On decomposing artificial Borat of lime in the same manner as the natural Borat, he obtained by the

the addition of oxalat of ammonia a considerable precipitate. It appears therefore evident, that if the natural borat had contained only $\frac{1}{100}$ its weight of lime, some traces of it would have been discovered by the means which Cit. VAUQUELIN had employed; whence this chemist concludes, that the natural Borat Magnesien, which is perfectly transparent, contains no lime, but which however, in the opacous crystals, is admixed in form of carbonat, and is the cause of their opacity.

That mineral, therefore, should no longer be considered as a triple salt; and it ought not to have the appellation of Borat Magnesio-calcaire but only that of Borat Magnesien.

Dr. HUFELAND praises the excellent effects of the oil of the walnut kernel *(ol. nuc. Zugland)* in herpetic and other cutaneous complaints. He recommends it as one of the safest, most simple, and efficacious external remedies that can be resorted to, as it mitigates the pains and that burning sensation, sometimes almost insupportable, which accompany this obstinate disease; it never seems to have any ill effect if attention be given to the eruption suddenly disappearing, or during, as it is said, by the repulsion of the herpes, a circumstance which frequently happens by the application of metallic ointments, and which is often attended with much danger to the constitution; but although it cures the cutaneous affection in a short time, the cure is perfect and not followed by any bad consequences, providing the eruption does not originate in any obstinate internal or general disease. In a child, which was almost covered with a chronic and suppurating herpes, against which internal remedies, baths, and mercurial ointments had been employed without producing a perfect cure, the oil of walnut kernel was for some time used, and the eruption disappeared soon after. It is likewise an excellent remedy in small cutaneous eruptions, that are now and then observed in children. The oil ought to be fresh expressed, without heat, and applied to the affected places two or three times a day.

We find the Chenopodium Ambrosioides *(Botrys mexic. offic.)* very much recommended in HUFELAND's Journal in nervous diseases, spasms, paralyses, and asthmatic complaints. An old lady, who after an apopletic fit had retained a palsy of the tongue, to which the usual remedies had been applied without any benefit, was completely cured by this remedy; it proved likewise highly serviceable to a boy, who having had the small-pox, laboured under an obstinate nervous debility, and had lost the power of speech. The form in which it is to be used, is an infusion, or as a tincture.

The celebrated Dr. LENTIN, physician to his Britannic Majesty for Hanover, relates two cases of hydrops pectoris, in which the foxglove, digitalis purpurea, was administered with the greatest success.

cess. That obstinate disease, which frequently resists the most powerful remedies, seems to originate in an increased action of the vasa excernentia and in diminished action of the resorbent vessels. Digitalis seems of all others to be particularly adapted to the nature of that disease, as it diminishes the number of the pulse, and augments the oscillation of the resorbent vessels. The manner in which Dr. LENTIN uses this remedy is as follows: *Decoctum Digitalis Purpuerea.*

℞. Hb. digital. purpur. unc. j conc. coq. in aq. font. ℔ j. ß Colatur. unc. viij. admisce spirit. vin. rectific. unc. ß misc. et serv.

℞. Hujus decoct. unc. j. aq. menth. petrosel. aa. unc. ij. syrup. de althaea dr. ij. M. S. Every two hours a table spoonful to be taken.

The Professors of the Museum of Natural History in the garden of plants at Paris, have formed themselves into a Society, with a view of publishing whatever occurs new and interesting in this branch of national education. The extensiveness of the collection as it now stands, and the constant accumulation of new and interesting phenomena, will afford ample matter for their new publication, which they entitle, The Annals of the Museum of Natural History, the first Number of which has appeared, and which is to be repeated every Month; it consists of ten sheets and four plates, quarto size, so that this publication will form at the end of the year, two large quarto volumes of the newest matter in the several branches of Natural History; such as Comparative Anatomy, Chemistry, &c. The plates, which will be principally copied from Nature, and executed by Artists of known merit, cannot fail to become important to those who have not an extensive cabinet to resort to. In a future publication we mean to give a brief account of the contents of the first Number.

In a former Number (43) an anonymous Correspondent having asserted that Dr. Pearson had used Dr. Heberden's authority in his evidence at the House of Commons, for a statement which Dr. Heberden afterwards disallowed in giving his evidence, we are authorized to print the following explanation, communicated by Dr. Heberden to Dr. Pearson.

"Dr. Heberden acquiesces in the correctness of his printed evidence, with the addition of only two words, viz. "having heard nothing of it *from him*." In fact, Dr. H. was acquainted with Mr. Battiscombe, but received his information respecting the vaccine inoculation from another quarter. Still it is true, that when Dr. Heberden mentioned the circumstance to Dr. Pearson, upon Dr. Lind's authority, he corroborated his statement, by adding that Dr. Gisborne had been made acquainted with the same account through Mr. Battiscombe. So that Dr. H. may, in effect, be said to have related the circumstance to Dr. Pearson upon the united testimony of Dr. Lind and Mr. Battiscombe; though his information in the latter case not having been derived *immediately* from that gentleman,

gentleman, he could not, with propriety, produce to the Committee the authority of Mr. Battiscombe for what he had heard upon the subject."

Dr. Batty's Course of Lectures on the Theory and Practice of Midwifery, will commence on Monday, January 17, 1803, at eleven o'clock in the forenoon, at his house in Great Marlborough Street.

Mr. Macartney will commence his Lectures upon Comparative Anatomy and Physiology, at St. Bartholomew's Hospital, on Monday, the last day of this month, at eight o'clock in the evening: he intends also to include the structure of Vegetables, as being illustrative of the laws of organic existence. For further particulars apply to Mr. Nicholson, at the Apothecary's Shop, St. Bartholomew's Hospital.

Mr. Headington and Mr. Frampton will commence their Second Course of Lectures on Anatomy, Physiology and the Principles and Operations of Surgery, on Thursday the 20th of January, 1803, at 9 o'clock in the morning.

Private teaching under the direction of Mr. Armiger.

During the Winter, a Course of Lectures on Surgery, illustrated by cases received into the Hospital, will be delivered by Mr. Blizard, Mr. J. Blizard, and Mr. Headington.

Mr. Chevalier, Surgeon to the Westminster General Dispensary, will begin his next Course of Lectures on the Principles and Operations of Surgery, on Monday the 31st of January, at 7 o'clock in the evening, at his house in South Audley-street, Grosvenor-square, where printed particulars may be had.

Messrs. Wagstaffe and Syer will commence their Spring Course of Lectures on the Elements and Practice of Midwifery, on Monday tho 3d of January, 1803, at a quarter before seven in the evening, at their Lecture-room, No. 102, Leadenhall-street.

A Third Volume of Medicina Nautica, will be published in the course of a few days. Some new and curious particulars in the History of Health, are said to form a part of this interesting Volume.

Dr. Walker, Physician to the City of London Lying-in Hospital, has published General Observations on the Constitution of Women, and on some of the Diseases to which they are more particularly liable.

[W. Thorne, Printer, Red Lion Court, Fleet Street.]